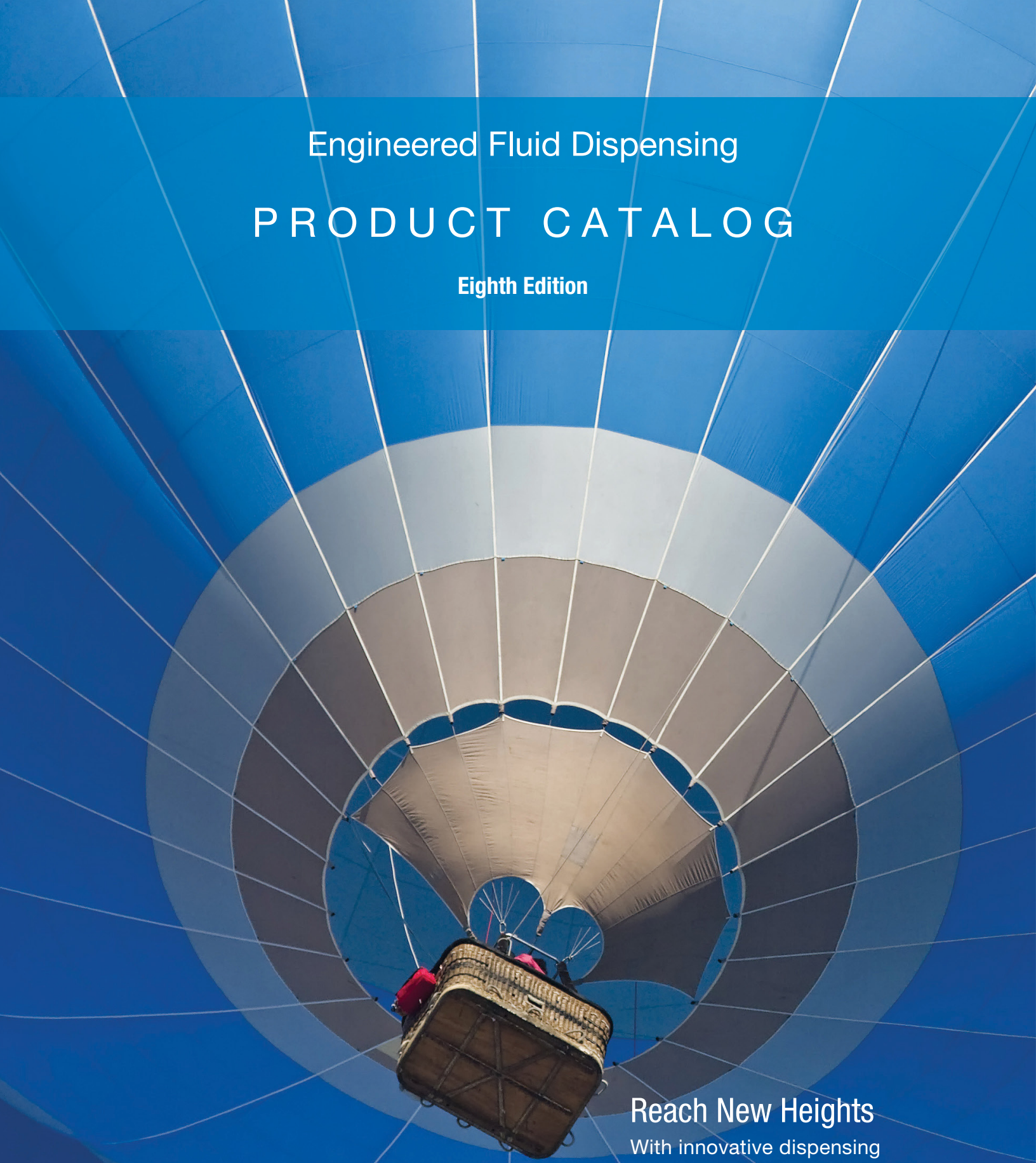
Engineered Fluid Dispensing

PRODUCT CATALOG

Eighth Edition



Reach New Heights

With innovative dispensing technologies

Nordson EFD

Contents

Since 1963, Nordson EFD dispensing systems have helped thousands of companies make precise deposits of adhesives, lubricants and other assembly fluids.

Our business is to match your specific application needs with our wide range of dispensing tools to maximize your total cost savings.

From benchtop dispensers to high-performance automated dispensing systems, EFD devices are used by manufacturers in hundreds of industries throughout the world.

We invite you to learn more, and look forward to working with you.

Industries

EFD engineered fluid control systems are trusted for applying controlled amounts of adhesives, sealants, lubricants, and other assembly fluids that increase productivity for nearly every industrial manufacturing process.

1K and 2K Fluid Packaging

• Adhesives • Bait Gels • Braze Pastes • Epoxies • Greases • Lubricants
• RTV Sealants • Silicones • Solder Pastes • Thermal Compounds

Aerospace

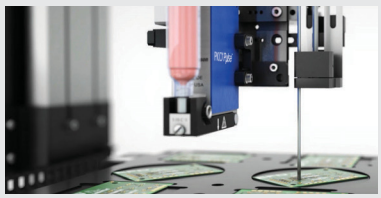
• Cockpits • Electrical Systems • Flight Recorders • GPS Systems • Instrument Panels
• Landing Gear • Measurement Instruments • Military Munitions • Propellant Parts
• Satellites • Seating • Turbines • Wire Harnesses

Automotive

• Air Conditioning Systems • Body Panels • Brakes • Control Switches
• Electrical Systems • Engine Components • Frames and Suspensions • Fuel Systems
• Instrument Panels • Lighting, Headlamps • Mirrors • Passenger Restraints
• Sensors, Relays, Regulators • Transmissions • Wheels • Windshields
• Wiring Harness Connectors

Construction

• Caulking • Chemical Anchors into Concrete, Brick, Stone, and Wood • Crack Repair
• Door and Window Sealing • Hydraulic Pumps • Joint Sealing
• Nail Plate Manufacturing • Roof Installation



Electronics

• Capacitors • Digital Cameras • Electronic Chips • Electronic Housing Chassis
• Fiber Optics • LEDs • Liquid Crystal Displays • Membrane Switches
• Microwave Components • PC Board Assemblies • SMT Circuit Boards

Food Manufacturing and Packaging

• Coating Food with Scent/Flavoring • Filling Perfume Bottles
• Filling/Topping Off Foil Packets and Other Containers
• Lubricating Can Stock, Can Ends, and Pull Tabs • Lubricating Foil Slitters
• Shrink Wrapping

Life Sciences

• Catheters • Contact Lenses • Defibrillators • Diagnostic Equipment • Hearing Aids
• Membranes • Pacemakers • Pills and Medicines • Respiration Devices
• Stent Coating • Surgical and Dental Tools • Syringe Lubrication • Vial Filling

Wireless

• Accessories • Camera Modules • Cover Glass • Displays • Frames • Keypads
• Microspeakers • Miscellaneous Unit Assembly • Protective Treatments
• Touch Panels

Precision Dispensers

Benchtop / Portable / Tools / Filling

EFD's precision dispensing systems make it simple to apply accurate, repeatable amounts of virtually any assembly fluid — including adhesives, epoxies, lubricants, threadlockers, paints, and grease.

By using digital timers and precision air regulators or positive displacement technology to determine the amount of material applied, EFD dispensers eliminate operator guesswork and take the variability out of the dispensing process.

The result is higher productivity, better quality and reliability, a cleaner and safer workplace, and lower production costs.

Products range from high-precision dispensers for critical applications that require a high degree of process control to economical units for general-purpose use.

Nordson EFD

Precision Fluid Dispenser Selection Guide

BENCHTOP DISPENSERS

	 Ultimus™ V	 Ultimus I	 Ultimus II	 Performus™ X100	 Performus X15	 Performus I	 Ultimus IV
Type	Air Powered	Air Powered	Air Powered	Air Powered	Air Powered	Air Powered	Positive Displacement
Recommended Fluids	All fluids	All fluids	Low-viscosity fluids	All fluids	Low-viscosity fluids	All fluids	All fluids
Air Pressure Range	0-100 psi (0-7 bar)	0-100 psi (0-7 bar)	0-15 psi (0-1 bar)	0-100 psi (0-7 bar)	0-15 psi (0-1 bar)	0-100 psi (0-7 bar)	—
Time Range	0-9.9999 sec	0-9.9999 sec	0-9.9999 sec	0-99.9 sec	0-99.9 sec	—	—
Vacuum Control	✓	✓	✓	✓	✓	✓	—
Warranty	1 year	10 years	10 years	2 years	2 years	1 year	2 years
Power Supply	Universal	Universal	Universal	Universal	Universal	Universal	Universal
Steady Mode	✓	✓	✓	✓	✓	✓	✓
Teach Mode	✓	✓	✓	✓	✓	—	—
Timed Mode	✓	✓	✓	✓	✓	—	—*
Digital Pressure	✓	✓	✓	✓	✓	Analog	—
Digital Time	✓	✓	✓	✓	✓	—	—
Digital Vacuum	✓	✓	✓	—	—	—	—
Multilingual	✓	✓	✓	—	—	—	—
LCD	✓	✓	✓	—	—	—	✓
Lockout of Time Setting	✓	✓	✓	—	—	—	—
Lockout of Pressure Setting	✓	—	—	—	—	—	—
Multiple Programs for Time	✓	✓	✓	—	—	—	—
Multiple Programs for Pressure	✓	—	—	—	—	—	—
Auto Sequencing**	✓	—	—	—	—	—	—
Maximum # of Programs	400	16	16	—	—	—	100
Initiate Signal	✓	✓	✓	✓	✓	—	✓
End-of-cycle Feedback	✓	✓	✓	✓	✓	—	✓
RS232	✓	—	—	—	—	—	—

* Ultimus IV features Forward, Pause, and Pullback movements.
** Programmable memory that automatically adjusts dispensing parameters for viscosity changes.

✓ Applicable | — Not applicable

High Precision Dispensers

Ultimus V Series

The Ultimus™ V High Precision Dispenser provides the highest level of accuracy and process control when applying fluids that change viscosity, including 2-part epoxies and other fluids that thicken over time, as well as UV-cure adhesives and materials that get thinner as ambient temperatures rise.

Features and Benefits

- Fully electronic control of dispense time, air pressure, and vacuum to ensure exceptionally high accuracy, repeatability, and shot consistency
- Programmable memory that automatically adjusts dispensing parameters for viscosity changes
- Interactive PC software and remote communications with PC/PLC via RS232 protocol
- Selectable operator lockout and alarm settings

Specifications

Cabinet size: 22.5W x 9.50H x 19.9D cm
(8.86W x 3.74H x 7.85"D)

Weight: 3.4 kg (7.7 lb)

Cycle rate: Exceeds 600 cycles per minute

Time range: 0.0001 to 9.9999 seconds

Input AC (to power supply):
100-240 VAC ±10%, 0.5 Amp, 50/60Hz

Output DC (from power supply):
24 VDC, 1.66 Amp maximum

End-of-cycle feedback circuits:
5 to 24 VDC, 100 mA maximum

Initiate circuits: Foot pedal, finger switch or
5 to 24 VDC signal

Approvals: CE, RoHS, WEEE & China RoHS Compliant

Warranty: 1 year, limited

7012590 Ultimus V
Features a 0-100 psi (0-7 bar) pressure regulator that handles all fluids.

7012589 Ultimus V – Calibrated
Same as #7012590 but the unit has been calibrated to EFD's specifications using standards traceable to the National Institute of Standards and Technology (NIST).

7014503 Ultimus V Optimeter 30cc
Specifically designed to work with the Ultimus V, the patented Optimeter™ provides even greater control when dispensing all fluids by automatically increasing airflow as the syringe barrel empties. Specify #7014504 for Optimeter 10cc.

"Nordson EFD's Ultimus V dispenser is a notable improvement over the previous generation, reducing variation and improving shot-to shot-consistency."
– Renishaw

Don't Forget to Order Your Components
Nordson EFD Optimum® components are designed to work with your dispenser as part of a complete, integrated system that produces the most accurate, repeatable deposits possible. See Optimum Dispensing Components for details.

www.nordsonefd.com/Ultimus-V

ULTIMUS MODELS AND FEATURES

Features	Dispense Time Display	Air Pressure Display	Adjustability			Modes of Operation			Time Range		Air Pressure Range		Input/ Output	Universal Voltage
Models	Digital	Digital	Time	Air	Vac	Steady	Timed	Teach	0-999.9 sec.	0-9.9999 sec.	0-100 psi (0-7 bar)	0-15 psi (0-1 bar)	5-24 VDC Signal	100-240 VAC 50/60Hz
Ultimus I	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓
Ultimus II	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
Ultimus V	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓

Ultimus I–II Series

Featuring simultaneous digital display of all dispenser settings and time adjustment as fine as 0.0001 seconds, Ultimus I–II dispensers bring exceptional process control to medical device, electronics, and other critical dispensing processes.

Features and Benefits

- All-digital, multi-function display
- 16 memory settings
- 4-decimal time setting
- Multilingual display
- Operator lockout of time setting
- Universal power supply

Specifications

Cabinet size: 14.3W x 18.1H x 17.3D cm (5.63W x 7.12H x 6.82"D)

Weight: 2.3 kg (5.0 lb)

Cycle rate: Exceeds 600 cycles per minute

Time range: 0.0001 to 999.9999 seconds

Input AC (to power supply): Universal Multi Voltage 100-240 VAC, 50/60Hz

Output DC (from power supply): 24 VDC, 1.04 Amp maximum

End-of-cycle feedback circuits: 5 to 24 VDC, 100 mA maximum

Initiate circuits: Foot pedal, finger switch or 5 to 24 VDC signal

Approvals: CE, CSA, RoHS, WEEE & China RoHS Compliant

Warranty: 10 year, no-fault

7017041 Ultimus I
Features a 0-100 psi (0-7 bar) pressure regulator that handles all fluids.

7012584 Ultimus I – Calibrated
Same as #7017041 except the unit has been calibrated to EFD specifications using standards traceable to the National Institute of Standards and Technology (NIST).

7002003 Ultimus II
Has a 0-15 psi (0-1 bar) regulator that provides greater control when dispensing thin fluids.

7012586 Ultimus II – Calibrated
Same as #7002003 except the unit has been calibrated to EFD specifications using standards traceable to the National Institute of Standards and Technology (NIST).

"The dispensers make quick, easy deposits. Our operators love it. A big winner."
– Automotive Electronics

Don't Forget to Order Your Components
Nordson EFD Optimum components are designed to work with your dispenser as part of a complete, integrated system that produces the most accurate, repeatable deposits possible. See Optimum Dispensing Components for details.

www.nordsonefd.com/Ultimus-I

Performus X Series

Nordson EFD's Performus dispensers increase throughput, improve yields, and reduce production costs through controlled application of adhesives, lubricants, and other assembly fluids.

Performus X15 and X100 units feature vacuum control, a convenient Teach function that makes it simple to set initial shot size, and an I/O connection.

Features and Benefits

- Consistent dots and fills, and neat beads
- Reduces guesswork, fluid waste, and operator fatigue
- Timed, Teach or Steady operation
- Vacuum control keeps thin fluids from dripping between cycles
- Digital time/pressure display

Specifications

Cabinet size: 26.4W x 17.1D x 6.7H cm (10.38W x 6.75D x 2.62H")

Weight: 1 kg (2.2 lb)

Power adapter AC input: 100–240 VAC (+/-10%), ~50/60Hz, 0.6 Amp

DC output: 24 VDC @ 0.75 Amp

Cycle rate: Exceeds 600 cycles per minute

Time range: 0–99.9 seconds

End-of-cycle feedback circuits: 5-24 VDC, 100 mA maximum

Cycle initiate: Foot pedal, finger switch, or 5-24 VDC signal

Input air pressure: 7.0 bar (100 psi) maximum

Air output: 0-7.0 bar (0-100 psi)

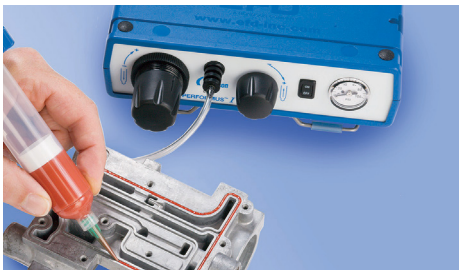
Approvals: CE, ETL, RoHS, WEEE & China RoHS

Warranty: 2 year, limited

7363256 Performus X100
Features a 0–100 psi (0–7 bar) pressure regulator that handles all fluids.

7363257 Performus X15
Features a 0–15 psi (0–1 bar) pressure regulator that provides greater control when dispensing thin fluids.

Don't Forget to Order Your Components
Nordson EFD Optimum components are designed to work with your dispenser as part of a complete, integrated system that produces the most accurate, repeatable deposits possible. See Optimum Dispensing Components for details.



Performus I

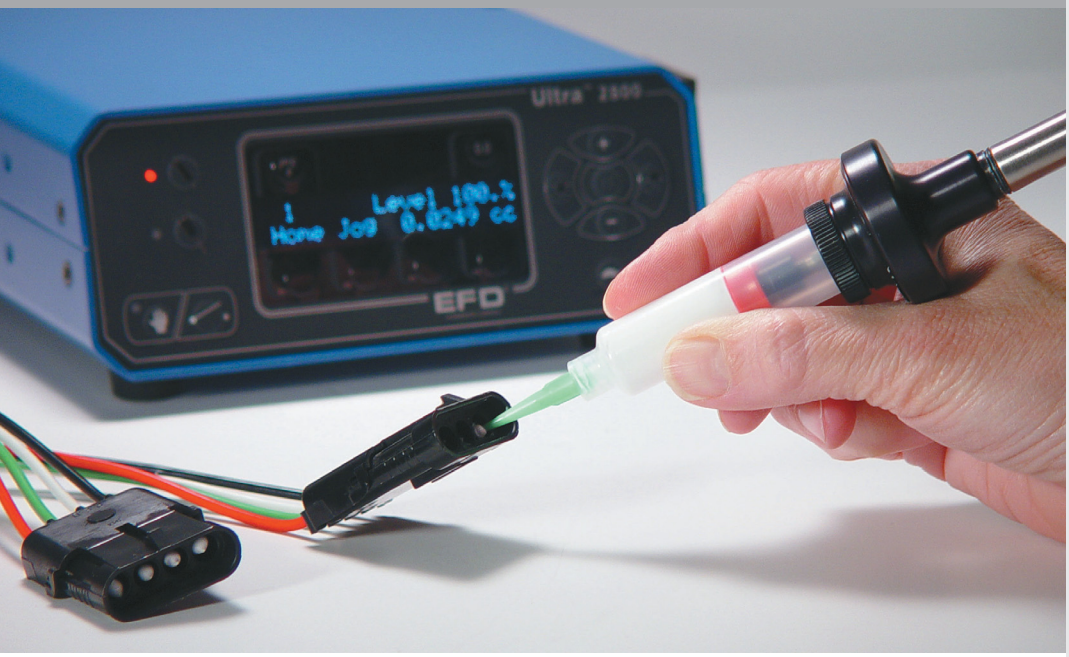
Used for operator-controlled dispensing applications that do not require a timed shot, the Performus I handles all fluids to dispense dots, beads, and fills. It features an electric foot pedal, plus vacuum control to keep thin fluids from dripping.

Features and Benefits

- Steady mode
- Analog air pressure display
- Fast, controlled application
- Clean, drip-free cutoff

7012330 Performus I
Features a 0-100 psi (0-7 bar) pressure regulator that handles all fluids.

Positive Displacement Dispensers



Ultimus IV Series

Positive displacement dispensers are ideal for applying uniform amounts of 2-part epoxies and other fluids that change viscosity over time.

Compressed air is not required — instead, these electrically operated units use stepper motors and patented technology to advance and retract a piston inside the syringe barrel. They will produce accurate, repeatable deposits, regardless of changes in fluid viscosity or temperature.

Features and Benefits

- Highly repeatable, precise fluid control
- Non-pneumatic, shop air not required
- All-electric, multi-function display
- Programmable pullback stops drooling
- 100 user-defined memory cells

Specifications

Cabinet size: 18.4W x 8.1H x 32.3D cm (7.25W x 3.18H x 12.73"D)

Weight: 3.7 kg (8.2 lb)

Cable assembly: 1.8 m (6 ft)

Input AC (to power supply): Universal Multi Voltage 100-240 VAC, 50/60Hz

AC input frequency: 50/60Hz

Initiate circuits: Foot pedal, cycle start button or 5 to 24 VDC signal

Approvals: CE, RoHS, WEEE & China RoHS Compliant

Warranty: 2 years, no fault

7017178 2800-3
For 3cc syringe barrels

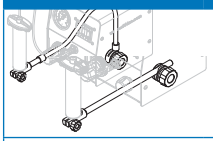
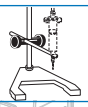
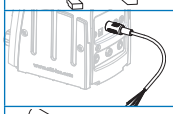
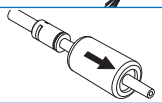
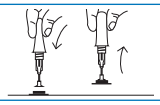
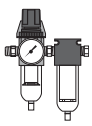
7017181 2800-5
For 5cc syringe barrels

7017177 2800-10
For 10cc syringe barrels

7017179 2800-30
For 30cc syringe barrels

Don't Forget to Order Your Components
Nordson EFD Optimum components are designed to work with your dispenser as part of a complete, integrated system that produces the most accurate, repeatable deposits possible. See Optimum Dispensing Components for details.

Dispenser Accessories

	PART#	ACCESSORY	DESCRIPTION	Ultimus I-II	Ultimus IV	Ultimus V	Performus X
	7017105	Flex arm syringe barrel holder	Mounts to dispenser cabinet; can be adjusted to multiple positions	✓		✓	
	7017113	Stiff arm syringe barrel holder	Mounts to dispenser cabinet and holds barrel in fixed position	✓		✓	
	7014503	Optimeter - 30cc size	Syringe barrel adapter that maintains consistent full-to-empty pressure on fluid being dispensed			✓	
	7014504	Optimeter - 10cc size				✓	
	7016718	Finger switch (Rectangular Connector)	Low voltage, push-button finger switch controls dispense cycle			✓	✓
	7017089	Finger switch (Round DIN Connector)		✓	✓		
	7021053	Syringe barrel production stand	Provides full-barrel swivel, horizontal, and vertical adjustment. Accepts all EFD barrels.	✓		✓	✓
	7017143	8-pin I/O connector assembly	Allows easy connection to dispenser for external control	✓	✓		✓
	7017049	Cleanroom filter muffler	Filters output air to meet Fed 209-B (0.5 micron particulates)	✓		✓	
	7024803	VacTweezer™ pickup tool	Useful, low cost pick-and-place tool with staticide treated kit. Includes (7) tips, (5) pad sizes	✓		✓	✓
	7013229	Dispensing tip sample kit	Includes a selection of various types and styles of dispensing tips, pistons, tip, and end caps — 150+ pieces	✓		✓	✓
	7002002	5-micron filter/regulator	Provides proper air filtering for all dispensers. Order if you do not have a clean, dry, filtered factory air supply.	✓		✓	✓
	7016548	5-micron filter/regulator with coalescing filter	5-micron filter/regulator with coalescing filter	✓		✓	✓
	7021515	Coalescing filter assembly only	Recommended for systems dispensing cyanoacrylates	✓		✓	✓
	7016540	Filter element replacement kit	Removes liquid aerosols from air supply	✓		✓	✓

"Your dispensers work great. Making dots used to be an art. Now we don't even think about it. We just fill the barrels and go."

– Preferred Technical Group

725-HL

740V-HL

752V-HL

725-HL Hand Lever Valve
740V-HL Hand Lever Valve
752V-HL Hand Lever Valve

Handheld dispense valves are a good choice for manual assembly applications where a timed shot is not required and a relatively large amount of fluid is being applied.

Handheld dispense valve systems are shipped complete with all hardware necessary for production. Systems include a lever-actuated dispense valve, 1.0 liter or 5.0 liter tank reservoir with pressure regulator (1 to 60 psi), all fittings, 10-ft fluid feed tube, disposable plastic tank liner, valve stand, and (30) different dispensing tips.

Features and Benefits

- Ergonomic design
- Positive shutoff, no dripping
- Easy to use
- Simplified maintenance

725-HL

Handheld piston valve provides high-flow application of medium- to high-viscosity non-reactive fluids.

740V-HL

Handheld needle valve dispenses precise beads and dots of low- to medium-viscosity fluids like UV-cure adhesives, paints, and inks activators and lubricants.

752V-HL

Handheld diaphragm valve is ideal for gasket bonding and applying anaerobics or cyanoacrylates.

7020888 725-HL High-flow Piston Valve with Hand Lever
Wetted valve parts are UHMW polyethylene and hard-coat anodized aluminum. Includes #7021499 fluid inlet fitting, (2) #7018554 nozzles, #7016948 tip adapter and (6) #7018051 tapered tips. Order tank and tubing separately.

7021209 740V-HL Needle Valve with Hand Lever

7021205 740SYS-1 system
Wetted valve parts are PTFE, stainless steel and hard-coat anodized aluminum with 1.0 liter tank.

7021206 740SYS-4 system
Identical to the 740SYS-1 except supplied with a 5.0 liter pressure tank.

7021415 752V-HL Diaphragm Valve with Hand Lever

7021408 752SYS-1 system
Wetted valve parts are UHMW polyethylene. Accepts one pound bottles of cyanoacrylates, anaerobics and other low viscosity fluids. Supplied with a 1.0 liter tank.

7021409 752SYS-4 system
Identical to the 752SYS-1 except supplied with a 5.0 liter pressure tank.

DISPENSING COMPONENTS

Disposable polyethylene nozzles with 1/4 NPT to fit 725-HL valves. May be cut as required. (10) per package.

Part #	Description
7018555	63.5 mm x 3.1 mm opening (2 1/2" long x 1/8")
7018557	63.5 mm x 1.6 mm opening (2 1/2" long x 1/16")

Metal nozzles 38 mm (1 1/2") long with 1/4 NPT to fit 725-HL valves

Part #	Gauge	ID
7014850	7	3.8 mm (0.150")
7014851	8	3.4 mm (0.135")
7014848	10	2.7 mm (0.106")
7014842	12	2.2 mm (0.085")
7014844	14	1.6 mm (0.063")
7014846	16	1.2 mm (0.047")

Fluids	MODELS 752V-HL	740V-HL	725-HL
Anaerobics	●	X	X
Oils	●	●	X
Cyanoacrylates	●	X	X
White Glues	X	●	●
Greases	X	●	●
Braze Pastes	X	X	●
Paste Fluxes	X	●	●
Solvents	●	●	X
Vinyl Adhesives	X	●	●

Key
● Recommended
X Do not use

HPD

DispensGun

HPD Hand Plungers DispensGun

Versatile and inexpensive, manual dispensers are ideal for touch-ups, low-volume assembly, and field work. They can be used with all EFD syringe barrels, pistons, and tips.

Features and Benefits

- Ergonomic design
- Fatigue-free dispensing of thick fluids
- Positive shutoff, no dripping
- Simplified maintenance
- Reusable

HPD

Designed for use with EFD syringe barrels and pistons, HPD™ Hand Plungers provide a clean, comfortable alternative to squeeze bottles and hand syringes.

DispensGun®

Features 10:1 mechanical leverage that makes it easy to dispense thick materials like greases and silicones without hand fatigue. A clean cutoff when the trigger is released prevents oozing between fluid applications.

Fluids	MODELS	
	DG	HPD
Anaerobics	▲	▲
Coatings	●	●
Cyanoacrylates	X	X
Gel Cyanoacrylates	▲	▲
White Glues	●	●
Epoxies	●	●
Inks	X	●
Greases	●	●
Oils	X	▲
Sealants	●	●
Silicones	●	●
Solder/Braze Pastes	●	●
Solvents	X	X
UV Cure	●	●

Key
- ● Recommended
- ▲ Satisfactory
- X Do not use

7023615 HPD3K Hand Plunger
3cc syringe barrel size

7023622 HPD5 Hand Plunger
5cc syringe barrel size

7023596 HPD10K Hand Plunger
10cc syringe barrel size

7023610 HPD30K Hand Plunger
30cc syringe barrel size

7023133 DG3 DispensGun
3cc syringe barrel size

7023137 DG5 DispensGun
5cc syringe barrel size

7023125 DG10 DispensGun
10cc syringe barrel size

7023134 DG30 DispensGun
30cc syringe barrel size

7023141 DG55 DispensGun
55cc syringe barrel size

2K Dispense Guns

See 2K Dispense Guns for dispensing 2-component materials.

"Production doubled the first day the EFD systems were installed."
– Food Packaging Group

HPx High-Pressure Dispensing Tool

The HP™ Series high-pressure dispensing tool applies RTV silicones, epoxies, medical adhesives, and other thick fluids through dispensing tips as small as 0.004" in diameter. Designed to work with EFD air-powered dispensers, these tools will multiply the output of a standard 100 psi dispenser up to 7x.

Features and Benefits

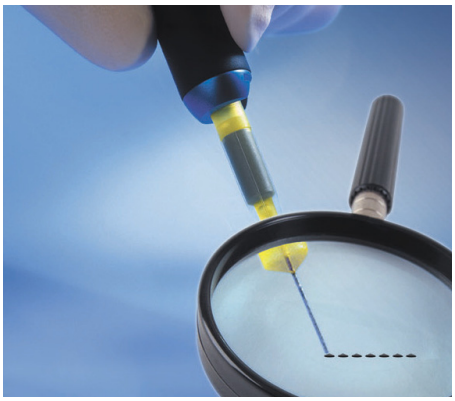
- Fast, fatigue-free application of thick fluids
- Aluminum handpiece is easy to hold
- Easy tip installation/removal with built-in wrench
- Low fluid level indicator

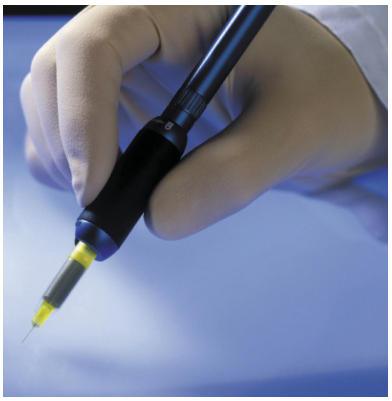
7023590 HP3cc Dispensing Tool
Uses 3cc EFD syringe barrels and pistons and produces a maximum pressure of 700 psi (48.2 bar). Specify #7361055 for use with 3cc non-labeled syringe barrels.

7015289 HP5cc Dispensing Tool
Uses 5cc EFD syringe barrels and pistons and produces a maximum pressure of 400 psi (27.6 bar).

7012598 HP10cc Dispensing Tool
Uses 10cc EFD syringe barrels and pistons and produces a maximum pressure of 400 psi (27.6 bar).

www.nordsonefd.com/HPXTool





Mikros Dispensing Pen

Minimizes waste and improves fluid control in critical applications. Working with EFD air-powered dispensers, it applies 2-part epoxies, UV-cure adhesives, and other medium viscosity fluids in consistent microdot amounts. Features a disposable 0.25cc fluid reservoir tip with 30, 32 or 33 gauge stainless steel dispensing needles.

Every 0.25cc fluid reservoir tip is shipped with tip protector and piston.

7018877 Mikros 5800MP
Mikros™ pen and user's guide included. Order reservoir tips separately.

7018879 Mikros 5800MP-SYS
Complete system includes (1) Mikros pen; (5) each reservoir tips in sizes 30, 32, and 33 gauge; (5) loading tubes; (1) piston installation tool and users' guide.

Universal Centrifuge ProcessMate 5000

The Universal Centrifuge quickly and efficiently removes entrapped air bubbles and air pockets from fluid that is packaged in syringes.

The adjustable speed control allows the user to adjust the G-force for low- to high-viscosity fluids. The electric brake can be initiated at the end of the cycle to quickly stop the rotor from spinning, saving additional process time.

For use with:

- 2-part Epoxies
- Frozen Epoxies
- RTVs
- Greases
- Various Other Fluids

Features and Benefits

- Improves process control and reduces rejected parts
- Spins up to (4) 3cc–30cc syringes
- Fixed angle rotor
- Lid locks for safety
- All-metal cabinet construction for safety

7015542 100-240 VAC Centrifuge
Multi voltage. RoHS compliant. Includes syringe adapters and power cord.

Temperature Control Unit ProcessMate 6500

The ProcessMate™ 6500 is suited for manual and automated applications using syringe barrels, dispense valves, and other dispensing equipment.

The ProcessMate controller maintains temperature-sensitive dispensing processes within ±0.1° C of a desired set point, across a 10° to 40° C range (50° to 104° F).

Features and Benefits

- Compact — controls just the process, eliminating the need for machine enclosures
- Provides precise process control
- Cost effective — localized temperatures are reached within minutes
- Easy to install, adjust, and use

Specifications

Cabinet size: 19.1W x 7.1H x 16.0D cm
(7.5W x 2.8H x 6.3"D)

Weight: 1.0 kg (2.2 lb)

Input AC (to power supply): Universal Multi Voltage
100-240 VAC, 50/60Hz

Output DC (from power supply):
24 VDC, 1.04 Amp maximum

Air input: 40-100 psi (2.76-7.0 bar)

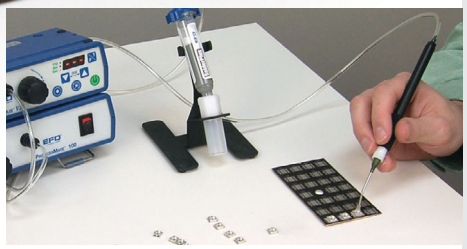
Air usage: 55 L/Min (2 CFM)

Temperature control:
+/-0.1° C from 10° C to 40° C (50° F to 104° F)

Ambient operating condition limits:
Temperature: -10° C to 55° C (14° to 131° F)
Humidity: 85% RH at 30° C (86° F) non-condensing
Height above sea level: 2000 meters max. (6,562 ft)

7020340 Temperature Control Unit
Includes fittings, muffler, connectors, overlay, and universal power cord.

Vacuum Pickup System ProcessMate 100



The ProcessMate 100 provides a simple, efficient way to lift and position small or delicate components in benchtop assembly processes.

To lift the component, the operator simply places the pickup pen on the component and presses an electric foot pedal to apply vacuum. When the component has been positioned, releasing the foot pedal stops the vacuum and releases the component.

Note: If vacuum is only needed occasionally or there is no access to compressed air, the VacTweezer is a useful, low-cost pick-and-place tool.

Soft, see-through pickup pads make it easy to accurately place components without scratching or damage.

Features and Benefits

- Faster, more precise placement than conventional tweezers
- Simple setup and operation
- Prevents damage to delicate or intricate components
- Cost-effective way to increase throughput

Specifications

Cabinet size: 18.3W x 5.1H x 8.6D cm
(7.22W x 2H x 3.38"D)

Weight: 1 kg (2.2 lb)

Input AC (to power supply):
Universal Multi Voltage
100/240 VAC, 50/60 Hz

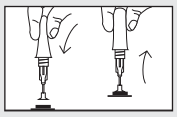
Output DC (from power supply):
24 VDC, 1.04 Amp maximum

Initiate circuits: Foot pedal, finger switch

Approvals: CE, CSA, RoHS, WEEE & China RoHS Compliant

7012329 ProcessMate 100 Vacuum Pickup Pen
Includes assorted antistatic tips and vacuum cups.

7024803 VacTweezer™ Pickup Tool
The kit includes the same assortment of silicone rubber vacuum cups and tips, along with a small squeeze bulb with a luer fitting that attaches to the tips to generate vacuum.



"Cut board time from 4 minutes to 45 seconds. Pickup tool is great."

– K.M.

Atlas Syringe Filling Systems

EFD filling systems provide a fast, neat and easy way to transfer greases, silicones, and other non-pourable fluids from cartridges and bulk containers into 3cc, 5cc, 10cc, 30cc, and 55cc syringe barrels.

Manual filling systems are a cost-effective way to eliminate trips to the refilling station and keep production lines running smoothly.

Barrel filling stations are available in sizes 2.5 fl oz, 6 fl oz, 12 fl oz, 20 fl oz, and 32 fl oz (75 ml, 180 ml, 360 ml, 600 ml, and 960 ml) cartridges.

Features and Benefits

- See-through design allows maximum amount of material usage per cartridge
- Fast and accurate filling
- Accommodates 3cc to 55cc syringes
- Small footprint allows easy positioning of multiple units
- Prefilling syringes increases productivity and reduces labor costs

7022446 922BL Filling System
2.5 fl oz (75 ml) cartridge. Comes complete with 0-100 psi (0-7.0 bar) regulator and gauge, retainer and cap assembly with toggle switch, fittings, stand, cartridge with plunger and 5cc, 10cc, and 30/55cc syringe barrel fill level plugs.

7022447 926BL Filling System
6 fl oz (180 ml) cartridge. Ships with the same parts as the 922BL.

7022445 920BL Filling System
12 fl oz (360 ml) cartridge. Ships with the same parts as the 922BL.

7013568 Filling System
20 fl oz (600 ml) cartridge. Ships with the same parts as the 922BL.

7013901 Filling System
32 fl oz (960 ml) cartridge. Ships with the same parts as the 922BL.

1/10 Gallon Caulking Tube

Filling systems make it simple to transfer silicones and other materials supplied in 1/10 gal cartridges to 3cc, 5cc, 10cc, 30cc, or 55cc syringe barrels without waste, mess or air bubbles.

7022452 940BL 1/10 Gallon Caulking Tube
Comes complete with 0-60 psi (0-4.1 bar) regulator and gauge, retainer and cap assembly with toggle switch, fittings, stand, and 3cc, 5cc, 10cc, and 30/55cc size syringe barrel fill level plugs.

Automatic Syringe Filling Systems

For extremely fast, consistent, and cost-effective volumetric filling of pastes, gels, and other non-pourable assembly fluids, specify our automatic systems.

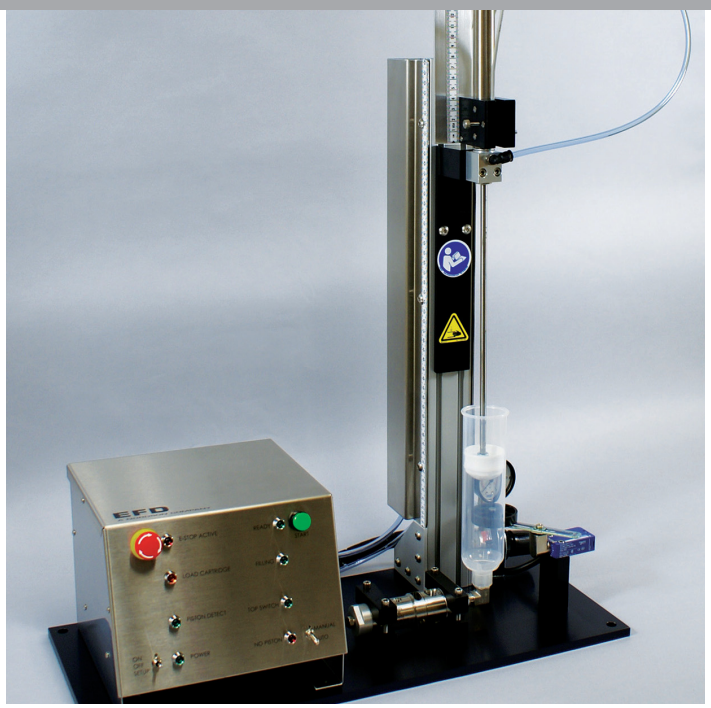
These systems rapidly fill syringe barrels with ± 2% accuracy at the press of a button. Syringes are bottom filled, allowing air to escape for a consistent volumetric fill. Accommodates 3cc, 5cc, 10cc, 30cc, and 55cc syringe barrels.

7022070 8000BF-PW
Use with reactive fluids that require a disposable fluid path at pressures up to 80 psi (5.5 bar). System ships complete with microprocessor controller, 5-micron filter/regulator, fittings, and foot pedal.

7022064 8000BF-HF
Use with cartridges and tanks at pressures up to 100 psi (7.0 bar). Ships with the same parts as 8000BF-PW.

7022068 8000BF-HPA
Use with very thick fluids at pressures up to 2500 psi (172 bar). Ships with the same parts as 8000BF-PW.

Atlas Cartridge Filling Systems



The Atlas™ Cartridge Filling System provides a simple, cost-effective way to fill 2.5 to 32 ounce cartridges with greater accuracy at lower cost, making it ideal for:

- Material suppliers
- Custom packagers
- Manufacturers who down-pack from larger containers

Easy to set up and operate, the Atlas Cartridge Filling System allows virtually any operator to bottom-fill 2.5 ounce to 32 ounce cartridges with consistent amounts of material.

7014123 Atlas Cartridge Filling System
Includes tool kit, accessory kit, desktop power supply with AC cord and Quick Start Guide.

Please assess the properties of your fluid before trying the Atlas Filling System. Fluids that are thick enough to have minimal dripping or spill out when bottom-filled will work best with the Atlas system.

Features and Benefits

- Accurate, repeatable filling
- Eliminates rework and overfills
- Fast, easy changeovers
- Handles viscosities from 2000 cps and up
- Sensors work with all color cartridges and pistons

Specifications

Cabinet size: 52.3W x 71.1H x 22.9D cm
(21W x 28H x 9"D)

Max extended tower height: 100 cm (39.4")

Weight: 9.1 kg (20 lb)

Input AC (to power supply):
Universal Multi Voltage
100/240 VAC, 50/60Hz

Machine power requirement:
24 VDC, 0.5 Amp maximum

Max. input shop air pressure: 120 psi (8.3 bar)

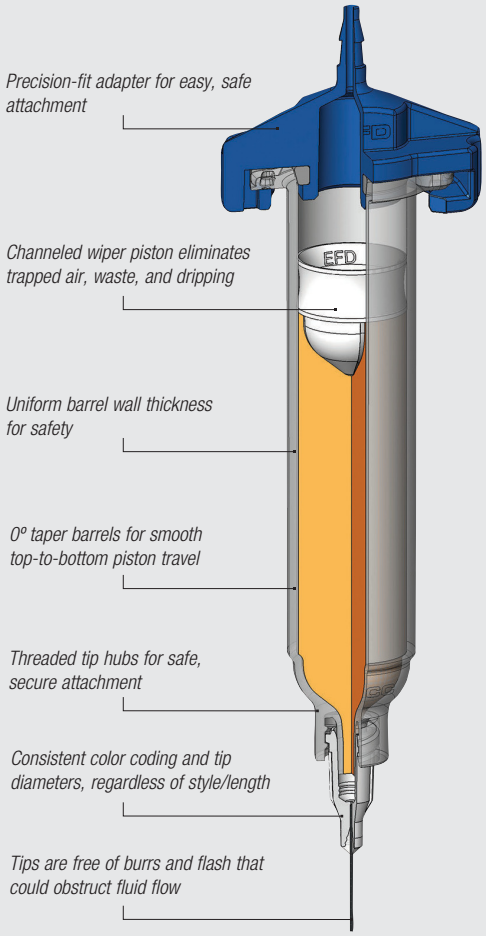
An electrical fuse: 250 volt, 1 Amp, slow blow, 3AG cartridge

REPLACEMENT PARTS

Part #	Description
7022019	Power supply, 30 W
7015447	Fuse kit, CF 3 (3/pkg)
7015377	Magnetic switch assembly, CF
7015378	Solenoid valve, CF
7015379	Plunger, CF
7015380	Magnetic switch
7013449	736HPA-NV valve
7015448	Kit, air cylinder assembly with switch
7015458	Cartridge detect switch, CF
7015460	Lever arm, CF

"We are very pleased with the ease of use. Any operator can use the Atlas Filling System to achieve consistent fill weights."
– Manufacturing Manager

Optimum Components & Precision Dispense Tips



The Standard in Fluid Dispensing

What makes EFD's Optimum dispensing components better than the rest? Engineered Fluid Dispensing™.

Each patented component has been designed as part of a complete, integrated system that improves yields and reduces costs by producing the most accurate, repeatable fluid deposits possible.

Our syringe barrels are made of a proprietary polypropylene blend that delivers exceptional clarity and dimensional stability. The unique internal design enhances fluid flow and minimizes turbulence and shear during filling and dispensing.

Matching pistons are available in six styles to ensure control for virtually any fluid in any application. When fluid is dispensed, the close tolerance wiping action eliminates waste and residue.

Syringe barrel adapters have a design that facilitates installation/removal, and a positive safety locking action that prevents accidental disengagement.

Free of flash, burrs, or other contaminants, EFD dispensing tips are designed with engineered hub flats for easy twist on, twist off, and SafetyLok threads to ensure safe, positive attachment to the syringe barrel.

Nordson EFD

Optimum Syringe Barrels

EFD produces the highest quality syringe barrels and pistons in the industry. Syringe barrels and pistons are produced in our own silicone-free facilities, where they are subjected to stringent quality control inspections throughout the entire manufacturing process.

"One stop shopping for syringes, barrel adapters, needles and tips along with excellent reference materials and pictures of actual applications to spark new ideas."
– Infinera

Features and Benefits

- Precision fit between syringe and piston ensures consistent fluid deposits
- Wiper piston improves fluid control, keeps fluids from dripping and eliminates waste by wiping the syringe wall clean
- Wide variety of styles and sizes
- Package labels include lot numbers for process control and traceability

SYRINGE BARREL & PISTON SETS

Each box contains one resealable bag of syringes and SmoothFlow™ pistons. Dust-free packaging.

Size	MOST FLUIDS Clear Barrels White Pistons	UV/Light Block* Amber Barrels White Pistons	Opaque Black Barrels White Pistons	Clear Barrels Blue Pistons**	Clear Barrels Clear Pistons	QTY
3cc	7012074	7012085	7012091	7012075	n/a	(50)
5cc	7012096	7012103	7012109	n/a	n/a	(40)
10cc	7012114	7012126	7012130	7012118	7360577	(30)
30cc	7012136	7012145	7012149	7015116	7360580	(20)
55cc	7012153	7012160	7012164	n/a	7360583	(15)

Sets are available in clear for most fluids; transparent amber for UV and light-sensitive materials (*up to 550 nm); and opaque black for complete light blockage.

**Blue LV Barrier sets include tip caps and are designed for dispensing cyanoacrylates and very low viscosity fluids.

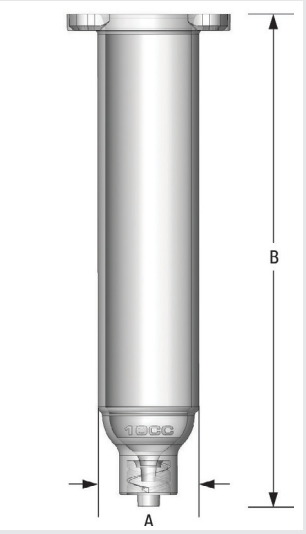
SYRINGE BARRELS

Each box contains one resealable ESD-safe bag of syringes. Dust-free packaging.

Size	MOST FLUIDS Clear Barrels	UV/Light Block* Amber Barrels	Opaque Black Barrels	Transparent Green Barrels	ESD-Safe Black Barrels	QTY
3cc	7012072	7012083	7012089	7015616	7362856	(50)
5cc	7012094	7012101	7012107	7015617	7362858	(40)
10cc	7012112	7012122	7012128	7015618	7362860	(30)
30cc	7012134	7012143	7012147	7015619	7362862	(20)
55cc	7012155	7012158	7012162	7015620	7362864	(15)

Note: 30cc and 55cc syringe barrels accept the same size barrel pistons, end caps, and adapters. Order pistons separately.

*Transparent amber for UV- and light-sensitive materials (up to 550 nm).



BARREL DIMENSIONS

Size	A	B
3cc	11.1 mm (0.44")	73.0 mm (2.88")
5cc	14.3 mm (0.56")	68.3 mm (2.69")
10cc	19.1 mm (0.75")	88.9 mm (3.50")
30cc	25.4 mm (1.0")	115.9 mm (4.56")
55cc	25.4 mm (1.0")	173.0 mm (6.81")

Note: This data is typical and does not constitute a specification.

www.nordsonefd.com/1kOptimum

A piston is inserted into the syringe barrel after it has been loaded with fluid to ensure uniform dispensing, prevent dripping, and eliminate waste by wiping barrel walls clean as fluid is dispensed. Optimum pistons are molded from high-density polyethylene.*

SYRINGE BARREL PISTONS

Size	White SmoothFlow	Beige SmoothFlow	Red SmoothFlow	Orange Flatwall	Blue LV Barrier	Clear Flex	QTY
3cc	7012166	7012170	7012168	7012321	7014602	7362320	(50)
5cc	7012172	7012176	7012174	7012323	n/a	7362317	(40)
10cc	7012178	7012182	7012180	7012325	7014600	7029355	(30)
30/55cc	7012184	7012188	7012186	7012327	7014598	7029551	(20)

*Clear Flex pistons are molded from LDPE (low-density polyethylene).

Optimum Pistons

Available in six styles:

White SmoothFlow wiper pistons are used with most fluids.

Beige SmoothFlow pistons are loose-fitting and used with air-entrapped fluids.

Red SmoothFlow pistons are tight-fitting and used with mechanical dispensers.

Orange Flat-walled pistons have a looser fit to prevent "bouncing" when dispensing stringy, air-entrapped fluids.

Blue LV Barrier pistons are for cyanoacrylates and very low viscosity fluids.

Clear Flex pistons are flexible and reduce "bouncing" in viscous fluids while maintaining excellent wall-wiping.

www.nordsonefd.com/ClearFlex

Optimum End and Tip Caps

End caps and tip caps provide an airtight seal that allows you to prefill syringe barrels or seal partially used syringes between shifts.

End caps feature a precision fit and use a convenient push-button to produce a snug, air-tight seal.

Tip caps have a large knurled gripping surface that simplifies attachment, and a vent that prevents air from being introduced into the syringe barrel during installation. The gripping action of the tip cap is designed to maximize the seal and yet be easily removed by the user. Available in blue or green.

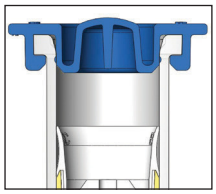
SNAP-TIGHT END AND TIP CAPS

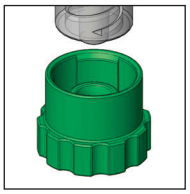
Snap-on end caps provide tight seal.

Size	Blue	Green	QTY
3cc	7012190	7014470	(50)
5cc	7012192	7014471	(40)
10cc	7012194	7014472	(30)
30/55cc	7012196	7014473	(20)

Twist-on tip cap seals syringe barrel.

	Blue	Green	QTY
One size	7012198	7014469	(50)





Optimum Adapter Assemblies

Lightweight adapters are designed for fast attachment and feature slots that lock securely onto matching tabs on the syringe barrel.

ADAPTER ASSEMBLIES

Size	Blue 0.9 m (3 ft) Hose	Blue 1.8 m (6 ft) Hose	Blue 0.9 m (3 ft) Hose w/ filter trap
3cc	7012341	7012059	7012063
5cc	7012054	7012058	7012062
10cc	7012339	7012057	7012061
30/55cc	7012338	7012056	7012060

Blue molded one-piece, acetal adapter head with NBR O-ring, flexible polyurethane air hose (5/32" OD X 3/32" ID), male quick-connect, and safety clip. For general use.

Optimum ESD-Safe Components

Nordson EFD's Optimum ESD-safe black dispensing components prevent static buildup when dispensing adhesives, pastes, coatings, and other assembly fluids used in manufacturing electronic products.

Features and Benefits

- Static decay rate less than 2.0 seconds
- High conductivity
- Meets industry standards that ensure static will not be transferred while dispensing
- Molded from inert, non-carbon, non-surface-migratory material that's safe, even for sensitive fluids

ESD-SAFE COMPONENTS				
Size	ESD-Safe Black Barrels	Qty/ Box	Black Adapter Assembly	
			0.9 m (3 ft) Hose	1.8 m (6 ft) Hose
3cc	7362856	50	7016095	7016096
5cc	7362858	40	7027849	n/a
10cc	7362860	30	7016097	7016098
30cc	7362862	20	7362545	7362546
55cc	7362864	25		

Adapter assemblies sold individually. Pistons sold separately; see previous page.

ESD-SAFE SMOOTHFLOW TAPERED TIPS					
Gauge	Part #	Style	ID		Qty/ Box
			mm	inch	
18	7018150	Tapered	0.84	0.033	50
20	7018211	Tapered	0.58	0.023	40
25	7018373	Tapered	0.25	0.010	30
27	7363483	Tapered	0.20	0.008	20
ESD-SAFE PRECISION STAINLESS STEEL TIPS					
30	7018448	General Purpose	0.15	0.006	25
33	7018477	Chamfered	0.10	0.004	25

Unity HiTemp Components

Nordson EFD's disposable Unity™ HiTemp™ syringe barrels provide a cost-effective alternative to syringes commonly used in pneumatic dispensing of hot melt adhesives. The barrels are compatible with Nordson's Unity IC Series and Unity PURJet™ 30 dispensing systems and other standard industry hotmelt dispensers.

Features and Benefits

- Proprietary materials maintain integrity at high temperatures for up to eight hours
- Disposability reduces downtime and maintenance costs with better cost of ownership
- Reliable, repeatable hot melt adhesive dispensing at up to 180° C

UNITY COMPONENTS							
Size	Syringe Barrels			Tip Cap White Extreme HiTemp	Tip Cap Orange Stemmed	End Cap Blue Unity	Qty/ Box
	HiTemp (125°)	Extreme HiTemp (180°)	HiTemp Tapered				
30cc	7360475	7360473	7363794	7360452*	7364073*	7363885	20

*Sold 50 per box.

Precision Dispensing Tips

Optimum Dispensing Tips

Available in six styles:

Precision Stainless Steel Passivated stainless steel tips handle a wide range of fluids and applications.

Tapered Smooth flow for application of medium - to high-viscosity fluids — especially thick or particle-filled materials like epoxies, RTVs, and braze pastes.

Flexible Polypropylene shafts reach into hard-to-access areas and will not scratch delicate surfaces. Easily cut to size or angled as needed.

Angled Stainless steel tips are available with 45º and 90º bends. Custom bends available.

Brush For spreading glues and greases. Available with soft or stiff bristles.

Specialty For specific applications: chamfered, ESD-safe, PTFE-coated and PTFE-lined, microdot tips, and oval tips.

EFD produces the highest quality dispensing tips in the industry. All tips are produced in our own silicone-free facilities and subjected to stringent quality control inspections throughout the entire manufacturing process.

Features and Benefits

- Free of flash, burrs, and contaminants
- Package labels include lot numbers for process control and traceability
- Consistent from style to style and lot to lot
- 360° SafetyLok™ thread ensures safe, positive attachment to syringe barrel
- Engineered hub flats for easy twist on, twist off

PRECISION STAINLESS STEEL TIPS

Gauge	Color		ID		OD		Straight 6.35 mm (0.25")	Straight 12.7 mm (0.50")	Straight 25.4 mm (1.0")	Straight 38.1 mm (1.5")	45° Bend 12.7 mm (0.5")	90° Bend 12.7 mm (0.5")	45° Bend 38.1 mm (1.5")	Qty/ Box
			mm	inch	mm	inch								
14		Olive	1.54	0.060	1.83	0.072	7018029	7018043	7018032	7018035	7018044	7018045	7016906	50
15		Amber	1.36	0.053	1.65	0.065	7018056	7018068	7018059	7018062	7018069	7018070	n/a	50
18		Green	0.84	0.033	1.27	0.050	7018107	7018122	7018110	7018113	7018123	7018124	7016908	50
20		Pink	0.61	0.024	0.91	0.036	7018163	7018178	7018166	7018169	7018179	7018180	n/a	50
21		Purple	0.51	0.020	0.82	0.032	7005005	7018233	7018222	7018225	7018234	7018235	7016910	50
22		Blue	0.41	0.016	0.72	0.028	7018260	7018272	7018263	7018266	7018273	7018274	n/a	50
23		Orange	0.33	0.013	0.65	0.025	7018302	7018314	7018305	7018308	7018315	7018316	n/a	50
25		Red	0.25	0.010	0.52	0.020	7018333	7018345	7018336	7018339	7018346	7018347	n/a	50
27		Clear	0.20	0.008	0.42	0.016	7018395	7005008	n/a	n/a	7018404	7018405	n/a	50
30		Lavender	0.15	0.006	0.31	0.012	7018424	7018433	n/a	n/a	7018434	7018435	n/a	50
30		Black	0.15	0.006	0.31	0.012	7018448	n/a	n/a	n/a	n/a	n/a	n/a	50
32		Yellow	0.10	0.004	0.24	0.009	7018462	n/a	n/a	n/a	n/a	n/a	n/a	50

Burr-free, polished, passivated stainless steel dispensing tips with polypropylene SafetyLokhubs for a secure fit to barrel reservoirs. Black is ESD-safe.
- 6.35 mm (0.25") tips: Fast point-to-point dispensing.
- 12.7 mm (0.50") tips: Standard all-around precision dispensing tips.
- 45° and 90° bent tips: Easy access into hard-to-reach areas.

Precision Dispensing Tips

SMOOTHFLOW TAPERED TIPS

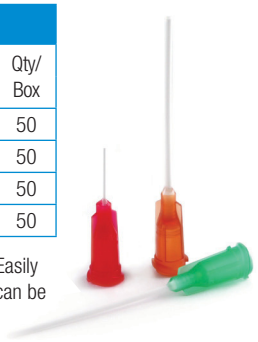
Gauge	Color		ID mm	ID inch	Standard	Opaque Rigid	Qty/ Box
14		Olive	1.60	0.063	7018052	7018049	50
16		Grey	1.19	0.047	7018100	7018097	50
18		Green	0.84	0.033	7018158	7018147	50
18		Black	0.84	0.033	7018150	n/a	50
20		Pink	0.58	0.023	7005009	7005006	50
20		Black	0.58	0.023	7018211	n/a	50
22		Blue	0.41	0.016	7018298	7005007	50
25		Red	0.25	0.010	7018391	7018370	50
25		Black	0.25	0.010	7018373	n/a	50
27		Clear	0.20	0.008	7018417	n/a	50
27		Black	0.20	0.008	7363483	n/a	50

Use with gel cyanoacrylates, UV-cure adhesives, sealants, and particle-filled materials or any medium- to high-viscosity fluid. Standard, flexible translucent tips are molded of polyethylene and contain a light-blocking additive that protects UV-sensitive fluids. Rigid opaque tips are molded of polypropylene and the opacity of the material delivers light-blocking functionality to protect light-sensitive fluids. Standard tapered tips are recommended for best results. Black is ESD-safe.

FLEXIBLE TIPS

Gauge	Color		ID mm	ID inch	12.7 mm (0.50")	38.1 mm (1.5")	Qty/ Box
15		Amber	1.25	0.049	7018085	7018080	50
18		Green	0.84	0.033	7018143	7018138	50
20		Pink	0.48	0.019	7018205	7018201	50
25		Red	0.36	0.014	7018366	7018362	50

Flexible polypropylene tubing for application into difficult-to-access areas. Easily drags along edges and around corners and prevents scratching. Tubing can be cut to length.



PTFE-COATED TIPS

Gauge	Color		ID mm	ID inch	OD mm	OD inch	12.7 mm (0.50")	Qty/ Box
21		Purple	0.51	0.020	0.84	0.033	7018243	20
22		Blue	0.41	0.016	0.74	0.029	7018290	20
23		Orange	0.33	0.013	0.66	0.026	7018326	20
25		Red	0.25	0.010	0.53	0.021	7018359	20

Controls wicking to stop drips in optical media applications.

CHAMFERED TIPS

Gauge	Color		ID mm	ID inch	38.1 mm (1.50")	12.7 mm (0.50")	6.35 mm (0.25")	Qty/ Box
18		Green	0.84	0.033	n/a	7018129	n/a	50
20		Pink	0.61	0.024	7018188	n/a	n/a	50
22		Blue	0.41	0.016	7018281	n/a	n/a	50
23		Orange	0.33	0.013	n/a	7018321	n/a	50
25		Red	0.25	0.010	n/a	7018352	n/a	50
27		Clear	0.20	0.008	n/a	n/a	7015236	50
33		Clear	0.10	0.004	n/a	n/a	7018482	25
33		Black	0.10	0.004	n/a	n/a	7018477	25

Use for microdot application of low viscosity fluids. Black is ESD-safe.

PTFE-LINED TIPS

Color		ID mm	ID inch	12.7 mm (0.50")	25.4 mm (1.0")	Qty/ Box
	Grey	0.51	0.020	7018256	7005003	50
	Pink	0.30	0.012	7018388	7005004	50

Resists clogging of cyanoacrylates. Use for microdot application of low viscosity fluids.

BRUSH TIPS

Style	50.8 mm (2") length Standard	50.8 mm (2") length High Flow	Qty/ Box
soft bristle	7022730	7022731	50
stiff bristle	7015351	7015467	50

Spread glues and greases. Brush tips are made with high quality 6/12 nylon, known for its strength and wear resistance. Soft brush tips are 0.003" diameter level; stiff brush tips are 0.006".

OVAL TIPS

Gauge	Color		12.7 mm (0.50")	Qty/ Box
15		Amber	7018078	50
18		Green	7024653	50
23		Orange	7024656	50

Flat ribbon deposits of thick pastes, sealants & epoxies.

TIP SHIELDS

Size	Color		Part #	Qty/ Box
3cc		Red	7017715	10
5cc to 55cc		Black	7017717	10

Reusable tip shields for light-sensitive and UV-cure adhesives. Fits over dispensing tip hub.

POLYETHYLENE NOZZLES

ID cm	ID inch	length cm	length inch	Part #	Qty/ Bag
0.318	0.125	6.35	2.5	7018555	10
0.157	0.062	6.35	2.5	7018557	10
0.157	0.062	10.6	4.0	7018559	10
0.08	0.031	10.6	4.0	7018561	10

Polyethylene nozzles thread into all cartridge sizes and 725 Series and 736HPA-NV valves. 1/4 NPT (6.35 mm) thread.

METAL NOZZLES

Gauge	ID mm	ID inch	Part #	Qty/ Bag
7	3.8	0.150	7014850	1
8	3.4	0.135	7014851	1
10	2.7	0.106	7014848	1
12	2.2	0.085	7014842	1
14	1.6	0.063	7014844	1
16	1.2	0.047	7014846	1

Metal nozzles thread into all cartridge sizes to fit 725 Series and 736HPA-NV valves. 38.1 mm (1 1/2") long metal nozzles with 1/4 NPT.

Precision Dispensing Tips

Applications	DISPENSING TIPS			
	Tapered	Stainless Steel	PTFE-Lined	Flexible
Very Low Viscosity Fluids	X	●	●	●
Particle-Filled Pastes	●	●	▲	X
Microdot Deposits	X	●	▲	●
Fluid is Reactive to Metal	●	X	●	●
Depositing in Recesses	▲	●	●	▲
Spreading/Smearing	●	▲	●	▲
Fast-Curing Glues	●	▲	●	●
Beading, Striping	●	●	●	▲
Easily Scratched Substrates	●	▲	●	●
Fluids				
Adhesives	●	●	●	●
Anaerobics	●	▲	●	▲
Conformal Coatings	●	▲	▲	X
Cyanoacrylates	●	▲	●	●
Gel Cyanoacrylates	●	▲	●	▲
Epoxies	●	●	●	X
Greases	●	●	●	X
Light-Cure Adhesives	●	▲*	▲*	X
Oils	●	●	●	▲
Paints	●	●	●	X
Sealants	●	▲	▲	X
Silver Epoxy	X	▲+	X	X
Solder Paste/Braze Pastes	●	●	▲	X
Solder Masks	●	●	▲	X
Solvents	X	●	●	●
UV-Cure Adhesives	●**	▲*	▲*	▲

*OK if used with tip shield, part #7017715 or 7017717.
+Chamfered tips are recommended for best results.
**Standard tapered tips are recommended for best results.

Key

● Recommended

▲ Satisfactory

X Do not use

"EFD components are more durable than others we have used. We have never encountered a problem with EFD tips and syringes, and that's saying a lot."

– Magnavox

www.nordsonefd.com/TipAdvice

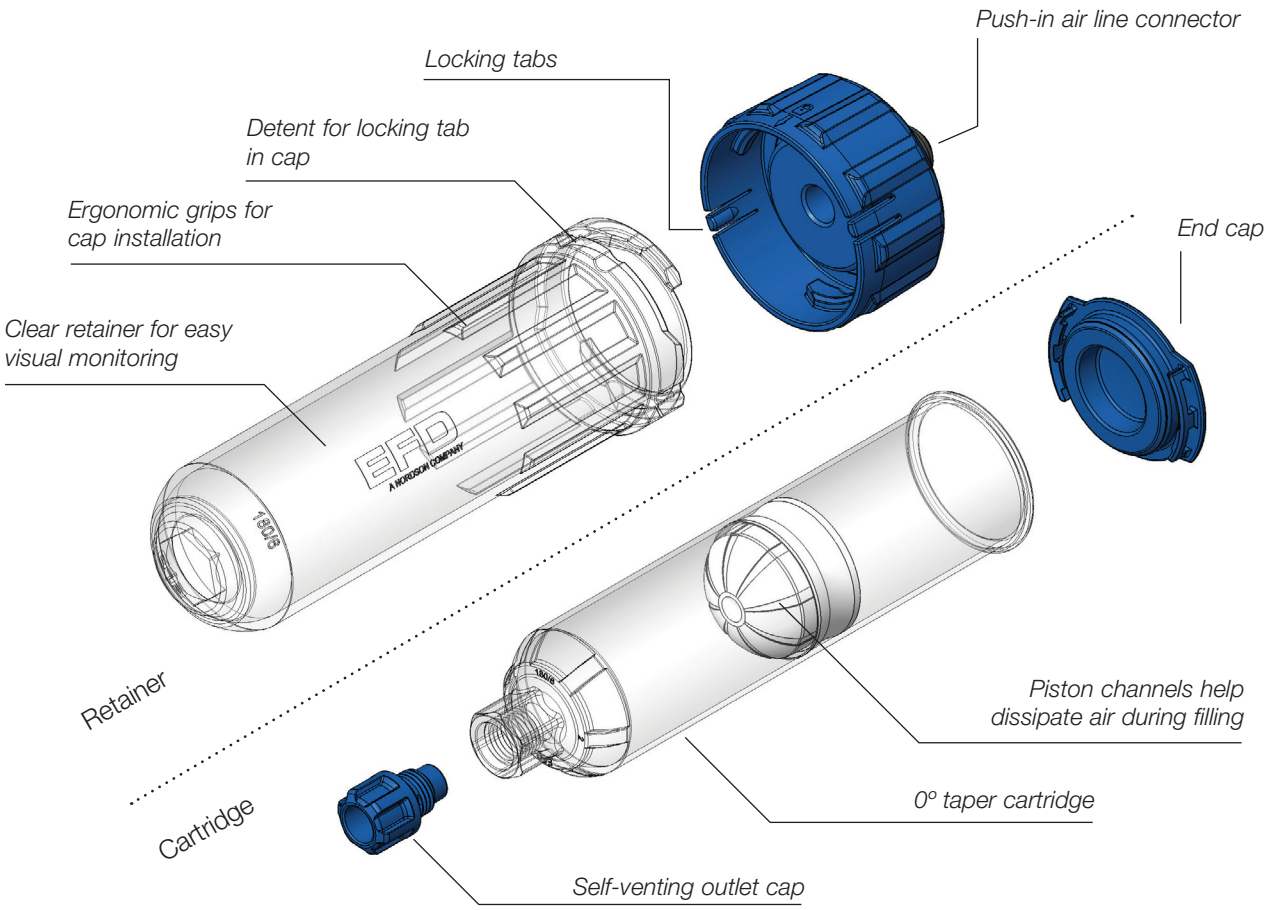
Optimum Cartridge Systems

Optimum cartridges and retainers have been designed to function as a complete, integrated system that improves yields and reduces costs in fluid packaging and dispensing processes.

Cartridge systems are designed for applications that require a reservoir larger than a 55cc syringe barrel. They are available in 2.5 fl oz, 6 fl oz, 12 fl oz, 20 fl oz, and 32 fl oz capacities, and can be used to make timed or visual deposits.

Features and Benefits

- Exceptional clarity to allow visual confirmation of fluid levels
- High-impact strength and dimensional stability
- ZeroDraft™ design ensures that internal diameter is consistent from top to bottom
- Excellent chemical compatibility with a wide range of fluids
- Available in clear, black, amber, green, and white
- White cartridges are molded from a proprietary blend and have better frozen temperature resistance



CARTRIDGES

Size	Clear	White	Amber	Black	Green	QTY
2.5 fl oz (75 ml)	7012389	n/a	7012390	7012391	7014167	25
6 fl oz (180 ml)	7012398	7361311	7012399	7012400	7014170	25
12 fl oz (360 ml)	7012407	7029498	7012408	7012409	7014173	25
20 fl oz (600 ml)	7012416	7028361	7012736	7013878	7014176	10
32 fl oz (960 ml)	7014088	7028392	7014089	7014091	7014090	10

Sets are available in clear for most fluids; transparent amber for UV and light-sensitive materials (*up to 550 nm); and opaque black for complete light blockage.

CARTRIDGE FITTINGS

For both internal molded nozzle cartridges and external threaded cartridges.
For cartridge nozzles, see Precision Dispensing Tips.

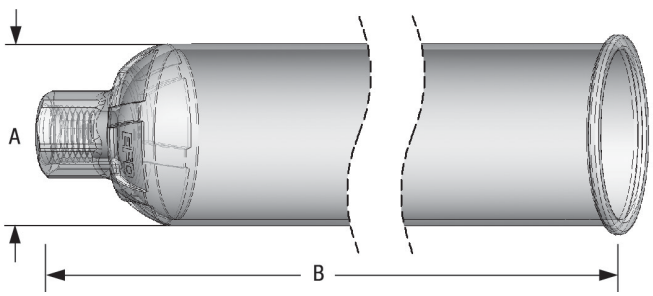
Fitting	Part #	Material	Description
	7022420	Nylon	Barrel loader fitting 90° 1/4 NPT male Female luer lock to barrel elbow
	7022415	Stainless Steel	Barrel loader fitting 1/4 NPT male Female luer lock
	7017020	Black Polypropylene	1/4 NPT x 3/8 compression
	7017014	Black Polypropylene	1/4 NPT x 1/4 compression

TIP ADAPTERS

Adapter	Part #	Material	Description
	7016941	Polypropylene	1/4 NPT standard cartridge tip adapter
	7016945	Nickel-plated Brass	1/4 NPT special purpose tip adapter for 725D Series, 725DA Series, 725HF-SS, 736HPA-NV, and cartridge
	7016948	Black Polypropylene	1/4 NPT tip adapter

CARTRIDGE DIMENSIONS

Size	A	B
2.5 fl oz (75 ml)	43.2 mm (1.70")	98.8 mm (3.89")
6 fl oz (180 ml)	43.2 mm (1.70")	181.5 mm (7.15")
12 fl oz (360 ml)	43.2 mm (1.70")	314.3 mm (12.38")
20 fl oz (600 ml)	68.3 mm (2.69")	249.7 mm (9.83")
32 fl oz (960 ml)	68.3 mm (2.69")	346.4 mm (13.69")



Note: This data is typical and does not constitute a specification.

Cartridge Retainer Systems

Optimum cartridge retainers are molded from high-tensile, clarified resin that permits easy visual monitoring of fluid levels. Large textured ribs provide an ergonomic grip for cap installation.

Retainer caps feature locking tabs that snap securely into detents on the retainer body with an audible click. A push-in air line connector on top of the cap eliminates the need for bayonet connectors.

"EFD is our favorite vendor to deal with – fast, professional, and top notch products."
– Contract Packager

RETAINER SYSTEMS

Retainer Systems*		Retainer Bodies	
Part #	Size	Part #	Size
7012430	2.5 fl oz (75 ml)	7013857	2.5 fl oz (75 ml)
7012433	6 fl oz (180 ml)	7013858	6 fl oz (180 ml)
7012436	12 fl oz (360 ml)	7013859	12 fl oz (360 ml)
7012439	20 fl oz (600 ml)	7013860	20 fl oz (600 ml)
7013899	32 fl oz (960 ml)	7013900	32 fl oz (960 ml)

Retainer Cap Assemblies

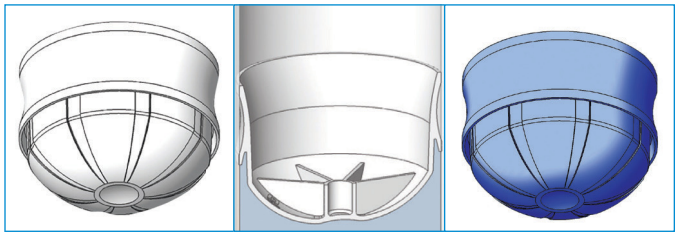
Part #	Size
7012531	2.5, 6, 12 fl oz (75, 180, 360 ml)
7012532	20, 32 fl oz (600, 960 ml)

Retainer Cap O-ring Kits (2/pkg.)

Part #	Material	Size
7014373	Buna	2.5, 6, 12 fl oz (75, 180, 360 ml)
7026914	EPR	2.5, 6, 12 fl oz (75, 180, 360 ml)
7026915	Viton	2.5, 6, 12 fl oz (75, 180, 360 ml)
7014372	Buna	20, 32 fl oz (600, 960 ml)
7026916	EPR	20, 32 fl oz (600, 960 ml)
7026917	Viton	20, 32 fl oz (600, 960 ml)

*Note: For retainer systems with 100 psi and 15 psi regulators, see Tanks, Reservoirs, and Pumps.
The retainer cap O-rings are available in three different materials. Please select the one most compatible with your fluid.
Standard O-ring material is Buna.

Cartridge Pistons



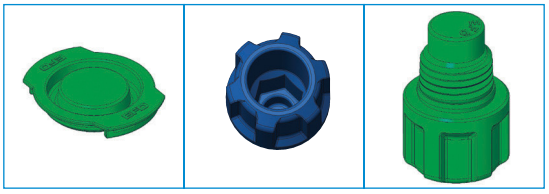
Optimum pistons are precision molded from high-density polyethylene. The consistent fit perfectly matches cartridge walls for smooth, unobstructed travel and ensures consistent results in fluid packaging and dispensing processes.

Unique channels help dissipate air during the filling process, reducing or eliminating the need to centrifuge. Dual wiping edges eliminate waste and residue to lower production costs and simplify disposal of used cartridges.

Blue pistons have a smaller leading edge wiper. The looser fit reduces dripping or stringing during the dispensing of very thick fluids and the color makes it easy to see the piston position inside the cartridge.

CARTRIDGE PISTONS			
Part #	Size	Color	Qty/Box
7012419	2.5, 6, 12 fl oz (75, 180, 360 ml)	White	25
7362087	2.5, 6, 12 fl oz (75, 180, 360 ml)	Blue	25
7012421	20, 32 fl oz (600, 960 ml)	White	10

Cartridge End/Outlet Caps



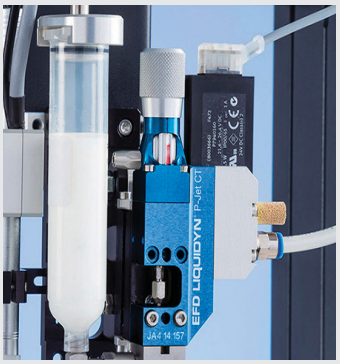
End caps snap securely over cartridge flanges to prevent leaks and fluid contamination. The center push-button presses the cap against the cartridge wall to form a positive, airtight seal.

Self-venting outlet caps feature a large ribbed gripping area that simplifies manual installation, along with precision molded threads and a tapered seat that provides a snug, leakproof seal.

CARTRIDGE END CAPS			
Part #	Size	Color	Qty/Box
7012423	2.5, 6, 12 fl oz (75, 180, 360 ml)	Blue	25
7014475	2.5, 6, 12 fl oz (75, 180, 360 ml)	Green	25
7012425	20, 32 fl oz (600, 960 ml)	Blue	10
7014474	20, 32 fl oz (600, 960 ml)	Green	10
CARTRIDGE OUTLET CAPS			
Part #	Size	Color	Qty/Box
7012427	All	Blue	25
7014476	All	Green	25

Valve Selection Guide

Jetting / Dispense / Spray



Choosing the right dispense valve for an application starts with the fluid.

Use this guide to:

- See which Nordson EFD valves work with specific fluids and applications
- Compare the features of EFD valves and controllers
- Select a type of fluid for an application

For example, if you know you want to use a jet dispensing valve because of its significant precision and fast cycle rate, you could use this guide to identify the types of fluids most suitable for jetting.

Benefits

- Performance that's proven for millions of dispense cycles
- Long service life with minimal maintenance
- Worldwide technical assistance
- Global application testing labs

Please note this guide does not include every EFD dispensing solution available. It's important to speak with an experienced EFD application specialist when choosing the right solution for your application.

Nordson EFD

FLUIDS	VALVE APPLICATIONS											
	Microdots*	Dots	Jetting	Potting	Encapsulating	Lines/Stripes	Filling / Packaging	Microspray	316L Aseptic Microspray	Spray	Internal Spray	Internal Band
Accelerators	xQR41 741MD	752V-UHSS	Pulse P-Jet, P-Dot	—	—	xQR41V 741V-SS	752V-UHSS	781Mini 787MS-SS	784S-SS	781S-SS	782RA	7860C-RS
Activators	xQR41 741MD	752V-UHSS	Pulse P-Jet, P-Dot	—	—	xQR41V 741V-SS	752V-UHSS	781Mini 787MS-SS	784S-SS	781S-SS	782RA	7860C-RS
Alcohol	xQR41 741MD	752V-UHSS	Pulse P-Jet	—	—	xQR41V 741V-SS	752V-UHSS	781Mini 787MS-SS	784S-SS	781S-SS	782RA	7860C-RS
Anaerobics	xQR41 PEEK** 752V-UHSS	xQR41 PEEK** 752V-UHSS	Pulse P-Jet	—	—	752V-UHSS	725HF-A	—	—	—	—	7860C-RS
Conformal Coatings	xQR41 741MD	752V-UHSS	Pulse P-Jet	—	752V-UHSS	752V-UHSS	725HF-SS	781Mini 787MS-SS	784S-SS	781S-SS	—	—
Copper Braze Paste	—	725DA-SS	—	—	—	725DA-SS	725HF-SS	—	—	—	—	—
Cyanoacrylates	xQR41 PEEK** 752V-UHSS	xQR41 PEEK ** 752V-UHSS	Pulse P-Jet, P-Dot	—	—	752V-UHSS	—	—	—	—	—	7860C-RS
Electrolytes	xQR41 741MD	752V-UHSS	Pulse P-Jet	—	—	—	752V-UHSS	781Mini 787MS-SS	784S-SS	781S-SS	—	—
Epoxies	xQR41 741MD	752V-UHSS	Pulse P-Dot	725DA-SS	725DA-SS	725DA-SS	725HF-SS	—	—	—	—	—
Fluxes, Liquid	xQR41 741MD	752V-UHSS	Pulse P-Jet	—	—	752V-UHSS	725HF-SS	781Mini 787MS-SS	784S-SS	781S-SS	—	—
Fluxes, Paste	xQR41 741MD	725DA-SS	Pulse P-Jet, P-Dot	—	—	725DA-SS	725HF-SS	—	—	—	—	—
Grease: low pressure *(to 100 psi, 7.0 bar)*	xQR41 741MD	725DA-SS	Pulse P-Jet, P-Dot	—	—	725DA-SS	725HF-SS	—	—	781S-SS	—	—
Grease: med. pressure *(to 300 psi, 20.7 bar)*	xQR41 741MD	736HPA-NV	Pulse P-Jet, P-Dot	—	—	736HPA-NV	736HPA-NV	—	—	781S-SS	—	—
Grease: high pressure *(to 2500 psi, 172 bar)*	—	736HPA-NV	Pulse P-Jet, P-Dot	—	—	736HPA-NV	736HPA-NV	—	—	—	—	—
Inks	xQR41 741MD	752V-UHSS	Pulse	—	—	xQR41V 741V-SS	725HF-SS	781Mini 787MS-SS	784S-SS	781S-SS	782RA	7860C-RS
Lubricants	xQR41 741MD	—	Pulse P-Jet, P-Dot	—	—	xQR41V	725HF-SS	—	—	—	782RA	7860C-RS
Oils	xQR41 741MD	752V-UHSS	Pulse P-Jet, P-Dot	—	—	xQR41V 741V-SS	725HF-SS	781Mini 787MS-SS	784S-SS	781S-SS	782RA	7860C-RS

*Note: For microdot applications requiring general purpose tip sizes between 27 and 33 gauge, specify valve model xQR41 in place of 741V-SS. **Conditional use with cyanoacrylates.

Application Definitions

Microdots: Any deposit having a volume less than 5 µl (5 µl = 5 microliters = 5/1000 cc).

Dots: Any deposit having a volume larger than 5 µl.

Jetting: Applying microdots, dots, lines, stripes, and encapsulates without making contact with a surface - also called non-contact dispensing.

Potting: Filling a cavity usually containing an electronic device, electronic circuit or wires.

Encapsulating: Applying a coating to an electronic component for protection from mechanical or environmental damage.

Lines/Stripes: A line, bead or stripe of material.

Filling/Packaging: Filling containers such as small bottles, cartridges, and tubes.

Microspray: Narrow spray pattern capability as small as 1 mm (0.04") wide.

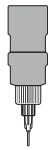
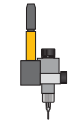
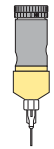
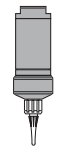
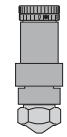
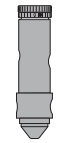
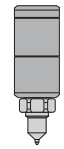
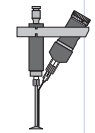
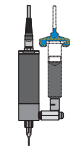
Spray: Applying fluids by using low pressure air to break the fluid into fine droplets for coating or marking.

Internal Spray: Spraying the inside diameter of holes and cylinders.

FLUIDS	VALVE APPLICATIONS											
	Microdots	Dots	Jetting	Potting	Encapsulating	Lines/Stripes	Filling / Packaging	Microspray	316L Aseptic Microspray	Spray	Internal Spray	Internal Band
Optical Dyes	702M-SS	702M-SS	Pµlse	—	—	702M-SS	—	—	—	—	—	—
Optical Lacquers	702M-SS	702M-SS	Pµlse	—	—	702M-SS	—	—	—	—	—	—
Paints	xQR41	752V-UHSS	P-Jet	—	—	xQR41V 741V-SS	725HF-SS	781Mini 787MS-SS	784S-SS	781S-SS	782RA	7860C-RS
Primers	xQR41	—	Pµlse P-Jet	—	—	—	—	781Mini 787MS-SS	—	—	782RA	—
Reagents	754V-SS*	754V-SS*	Pµlse P-Jet	—	—	754V-SS*	754V-SS*	781Mini 787MS-SS	784S-SS	781S-SS	—	—
RTV/Sealants *low pressure*	xQR41	725DA-SS	P-Jet P-Dot	725DA-SS	725DA-SS	725DA-SS	725HF-SS	—	—	—	—	—
RTV/Sealants *medium pressure*	xQR41	736HPA-NV	P-Jet P-Dot	736HPA-NV	736HPA-NV	736HPA-NV	736HPA-NV	—	—	—	—	—
RTV/Sealants *high pressure*	—	736HPA-NV	P-Jet P-Dot	736HPA-NV	736HPA-NV	736HPA-NV	736HPA-NV	—	—	—	—	—
Saline	—	754V-SS*	Pµlse P-Jet	—	—	754V-SS*	754V-SS*	—	784S-SS	—	—	—
Silicones	—	736HPA-NV	Pµlse P-Jet, P-Dot	736HPA-NV	736HPA-NV	736HPA-NV	—	781Mini 787MS-SS	—	781S-SS	—	—
Silicone Oils	xQR41 741MD	xQR41V 741V-SS	Pµlse P-Jet, P-Dot	—	—	xQR41V 741V-SS	—	—	784S-SS	—	—	—
SMD Glue	—	—	Pµlse	—	—	—	—	—	—	—	—	—
Solder Resists	—	725DA-SS	Pµlse P-Jet, P-Dot	—	—	725DA-SS	725HF-SS	—	—	—	—	—
Solvents	xQR41 741MD	xQR41V 741V-SS	Pµlse P-Jet	—	—	xQR41V 741V-SS	752V-UHSS	781Mini 787MS-SS	784S-SS	781S-SS	782RA	7860C-RS
Solder Pastes	794	794	P-Jet SolderPlus	—	—	794	—	—	—	—	—	—
UV-cure & Light-cure	xQR41 741MD	752V-SS	Pµlse P-Jet, P-Dot	752V-SS	752V-SS	xQR41V 752V-SS	725HF-A	—	—	—	—	—
UV-Cure with Anaerobics	xQR41 752V-SS	xQR41 752V-SS	Pµlse P-Jet	752V-SS	752V-SS	752V-SS	725HF-A	—	—	—	—	—
Water	xQR41	752V-UHSS	Pµlse P-Jet	—	—	xQR41V 741V-SS	752V-UHSS	781Mini 787MS-SS	784S-SS	781S-SS	782RA	7860C-RS
White Glue	—	725DA-SS	P-Jet	—	—	725DA-SS	725HF-SS	—	—	—	—	7860C-RS

*Important Note: For dispensing applications of low- to medium-viscosity fluids where a 316L SS wetted fluid body with aseptic fluid flow path is preferred, choose the 754V-SS diaphragm valve.

Maximum operating temperatures of EFD valves should not exceed 43° C (110° F) except for the 736HPA-NV, 741V, 781S, and 781Mini Series valves, which can operate up to 110° C (215° F).

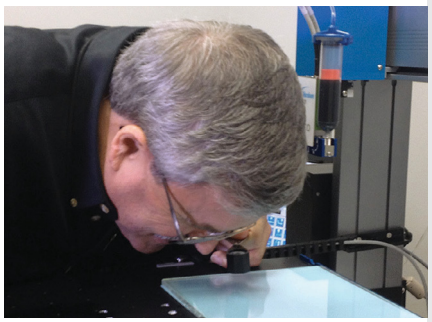
VALVE FEATURES	VALVES																
	 PICO Pµlse	 P-Jet P-Dot P-Jet Solder-Plus	 702M-SS	 725DA-SS	 725HF-SS	 725HF-A	 736HPA-NV	 xQR41 xQR41V 741MD-SS 741V-SS	 752V-SS	 752V-UHSS	 754V-SS	 781Mini 787MS-SS	 781S-SS	 782RA	 784S-SS	 7860C-RS	 794 794-TC
Adjustable fluid flow	✓	P-Jet	✓	✓	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	–	✓
Air cutoff	–	✓	–	–	–	–	–	–	–	–	–	✓	✓	✓	–	✓	–
Cycle rate ≥ 150Hz	1000Hz* 1500Hz* bursts	P-Jet P-Dot	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Fail-safe normally closed	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–	–
FDA-compliant wetted parts	–	–	✓	✓	✓	✓	–	✓	✓	✓	✓	✓	✓	–	✓	✓	–
Fluid body *Acetal*	–	–	–	–	–	✓	–	–	✓	–	–	–	–	–	–	–	–
Fluid body *PEEK*	✓	P-Jet P-Dot	–	–	–	–	–	✓****	–	–	–	–	–	–	–	–	–
Fluid body *303 Stainless Steel Tungsten Carbide*	✓	✓	✓	✓	✓	–	✓	✓	○	○	316L	✓	✓	–	316L	–	440C Tungsten Carbide
Fluid body *UHMW** Polymer*	–	–	–	–	–	–	–	–	–	✓	–	–	–	–	–	–	–
Micro-deposits	✓	✓	–	–	–	–	–	xQR41 xQR41V	–	–	–	✓*****	–	–	–	–	–
Modular design	✓	✓	–	–	–	–	–	xQR41 xQR41V	–	–	–	✓*****	–	–	–	–	–
Quick Release maintenance	✓	–	–	–	–	–	–	xQR41 xQR41V	–	–	–	✓*****	–	–	–	–	✓
Small form factor	–	–	✓	–	–	–	–	xQR41 xQR41V	–	–	–	✓*****	–	–	–	–	–
Snuff-back cutoff	–	–	–	✓	✓	✓	✓	–	–	–	–	–	–	–	–	–	✓
Stroke control reference	–	–	✓	–	–	–	–	✓	✓	✓	✓	✓ ✓	✓	✓	✓	–	–
Tamper-resistant stroke control	–	–	✓	–	–	–	–	○***	○	✓	✓	–	○	○	✓	–	–
UHMW polymer diaphragm**	–	–	✓	✓	✓	✓	–	–	✓	✓	PTFE	–	–	–	PTFE	–	–
303 stainless steel air cylinder	–	–	✓	–	–	–	✓	xQR41 741V-SS	✓	✓	316L	✓	✓	–	316L	–	–

*With approved conditional settings **Ultra High Molecular Weight polyethylene ***741V-SS model only ****xQR41 model only *****781Mini model only

CONTROLLER FEATURES	VALVE CONTROLLERS								
	PICO Touch	V200	9000	8000	8040	7160RA	7194	7100	7140
	Jet Valve Control	**Jet Valve Control**	**Dual Valve Control**	**Multi Valve Control**	**Multi Spray Valve Control**	**Radial Spinner/ Spray Valve Control**	**Auger Valve Control**	**Dispense Valve Control**	**Spray Valve Control**
Recommended valve(s)	PICO Pµlse	P-Jet P-Dot, P-Jet SolderPlus	702, 725, 736, 741, 752, 754, xQR41, xQR41V	702, 725, 736, 741, 752, 754, xQR41, xQR41V	781S, 784S, 781Mini, 787MS	782RA, 7860C-RS Spinner	794	702, 725, 736, 741, 752, 754, xQR41, xQR41V	781S, 784S, 781Mini, 787MS
Air pressure display	–	✓	✓	Analog	Analog	Digital	Digital	Digital	✓
Auto sequence mode	–	–	✓	–	–	–	–	–	–
Cycle rate	1000Hz* 1500Hz* burst	280Hz / 150Hz	500Hz	>600/minute	>400/minute	>400/minute	>400/minute	>600/minute	>400/minute
Digital time set and display	✓	✓	✓	✓	✓	✓	✓	✓	✓
Dual 24W temperature control	–	–	✓	–	–	–	–	–	–
5-micron filter/ regulator	–	–	Included	Included	Included	Included	Included	Included	Included
I/O communication-PLC	✓	✓	✓	–	–	–	–	–	–
I/O interface circuitry	✓	✓	✓	✓	✓	✓	✓	✓	✓
Independent multi-valve control	Single channel	Single channel	2-channel control	4-channel control	2-channel control	Single channel	Single channel	Single channel	Single channel
Low air pressure sensing	✓	–	<60 psi (4.1 bar)	<60 psi (4.1 bar)	<60 psi (4.1 bar)	<60 psi (4.1 bar)	<60 psi (4.1 bar)	<60 psi (4.1 bar)	<60 psi (4.1 bar)
Nozzle air shutoff delay	–	–	–	–	Adjustable 0 to 9.99 sec.	Adjustable 0 to 2.5 sec.	–	–	Adjustable 0 to 9.99 sec.
On the fly adjustability	✓	✓	✓	✓	✓	✓	✓	✓	✓
Panel mount/panel cutout size	142 mm x 133 mm (5.6" x 5.25")	450 mm x 125 mm (18" x 5")	257.2 mm x 96.8 mm (10.13" x 3.81")	183.6 mm x 51.6 mm (7.23" x 2.03")	183.6 mm x 51.6 mm (7.23" x 2.03")	226.3 mm x 68.8 mm (8.91" x 2.71")	226.3 mm x 68.8 mm (8.91" x 2.71")	142.9 mm x 68.8 mm (5.62" x 2.71")	205.4 mm x 68.8 mm (8.08" x 2.71")
Precise adjustablility	✓	✓	–	–	–	–	–	–	–
Pre-dispense time cycle delay	–	–	–	✓	–	–	–	–	–
Programmable	✓	✓	✓	✓	✓	✓	✓	✓	✓
Programmable lockout	✓	–	–	–	–	–	–	–	–
Purge control	✓	✓	✓	✓	✓	✓	✓	✓	✓
Spike & hold capability	–	–	✓	–	–	–	–	–	–
Test cycle verification	✓	✓	✓	✓	✓	✓	✓	✓	✓
Touchscreen	✓	–	–	–	–	–	–	–	–

*With approved conditional settings

✓ Applicable | O Optional | — Not applicable



Expert Application Testing

Nordson EFD offers a detailed process evaluation by experienced fluid dispensing experts at multiple EFD dispensing labs around the world.

EFD Global Application Labs are located in the USA, Brasil, the UK, Czech Republic, France, Germany, Russia, Spain, China, Japan, Korea, and other countries for expert help, fast response, and easy convenience.

Application testing is especially helpful to customers in selecting the appropriate PICO or pneumatic jet valve components, to make sure the system meets the requirements of your specific application.

Features and Benefits

- Testing by knowledgeable, dispensing experts
- Testing in EFD global labs and/or at customer facilities
- Testing with actual customer parts and assembly fluids, or with EFD sample test materials
- Testing with a range of recommended EFD solutions, including PICO and pneumatic jetting valves and EFD automated dispensing robots
- Detailed test reports
- May include videotaped results

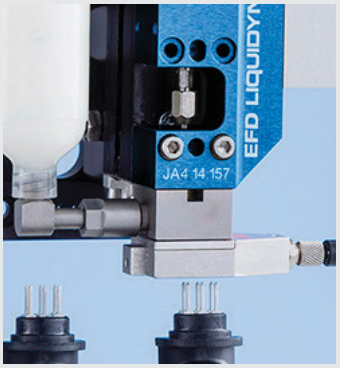
For details or to request an appointment, contact EFD at info@nordsonefd.com or go to www.nordsonefd.com/testing.

"Your technical assistance is formidable. Your help in solving our problems with the cyanoacrylate application was very important to keep our production line running correctly. Thank you."

– Kodak

Precision Jetting Systems

PICO / Liquidyn



Nordson EFD jet valve systems offer unparalleled speed and accuracy in non-contact dispensing, even for your most challenging applications.

Jetting, or non-contact dispensing, allows manufacturers to dispense small amounts of fluids at faster speeds without sacrificing accuracy. The results include reduced waste, rework, and rejects, and higher throughput yields.

About Piezo Technology

PICO® jet valves incorporate a piezoelectric actuator composed of stacked ceramic coins that expand and contract in response to changes in voltage supplied by the PICO controller. The piezo actuator connects to a vertical rod that mates with a tappet stem within a spring-energized "jetting" cartridge. The tappet stem has a wear-resistant ceramic sealing ball at its lower end.

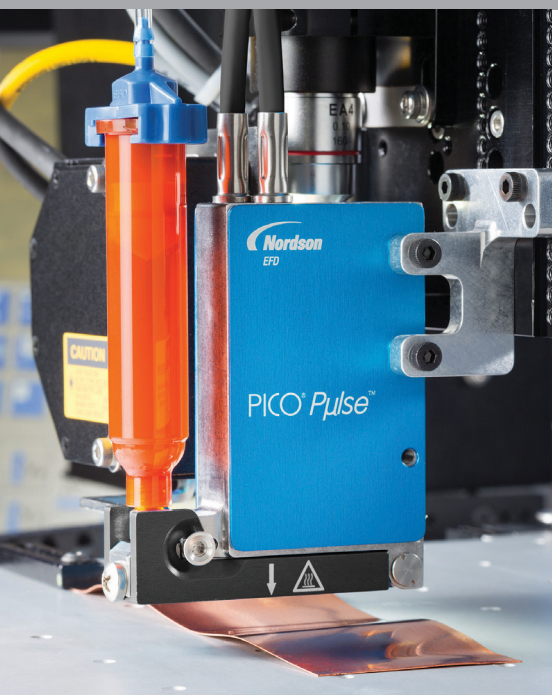
When the valve is closed, the ball is seated in the valve nozzle plate to prevent fluid flow between cycles. The unique precision engineering and machining of these critical components create an exceptional dispensing valve with the ability to apply precise, accurate micro-deposits of assembly fluid.

When voltage is applied to the actuator, the rod and cartridge sealing ball are raised so that the pressurized fluid can flow to the nozzle. When the voltage is changed, the rod and tappet stem sealing ball descend rapidly to "jet" the fluid out of the nozzle and onto the substrate.

Pneumatic Jetting

Liquidyn® pneumatic jet valves deliver precise, consistent noncontact dispensing of low- to high-viscosity fluids and feature easily exchangeable dispensing nozzles to meet a wide range of application requirements. Rigorously tested to withstand highly-industrial environments, Liquidyn pneumatic jet valves also feature a low cost of ownership.

Nordson EFD



PICO *Pulse* Jet Valve

For use with:

- Adhesives
- Alcohol
- Conductive Epoxies
- Food Colors
- Greases
- Hydrous Solutions
- Liquid Polymers
- Oils
- Organic Solvents
- Underfills
- UV-cure Adhesives

PICO *Pulse*® modular jetting technology removes the barrier between speed and accuracy. Even at max speed of 1000Hz continuous*, the PICO *Pulse* non-contact dispense valve provides industry-leading accuracy in deposit consistency and placement for your most challenging applications.

Non-contact jet valve systems make it possible to apply fluid in hard-to-access areas or onto uneven or delicate substrates where a dispensing needle cannot be used.

EFD's PICO piezoelectric jet dispensing systems have three components: (1) a PICO *Pulse* valve, (2) a PICO *Touch*™ controller, (3) and a fluid reservoir. All components are precisely engineered to work together as a complete, integrated system to deliver exceptionally fast, accurate deposits.

7361218 PICO *Pulse* Jet Valve SD
For standard duty applications with cycle rates less than 250Hz.

7361283 PICO *Pulse* Jet Valve HD
For heavy duty applications with cycle rates greater than 250Hz.

Features and Benefits

- Exchangeable, modular design for greater configurability
- Tool-free latch allows fast, easy serviceability and reduces downtime
- Capability to jet low- to high-viscosity fluids creats flexibility to meet changing needs
- Dispenses at up to 1000Hz continuous, with up to 1500Hz maximum bursts*
- Variable stroke for precise dispensing control
- Optional PEEK* wetted parts resist curing from reactive adhesives

* With approved conditional settings.

Specifications

Size: 22w x 120H x 75L mm (0.9w x 5H x 2.92"L)

Weight:
With cable: 524 g (18.5 oz)
Without cable: 362 g (12.8 oz)

Maximum fluid pressure: 700 psi (49.0 bar)

Fluid inlet thread: M5

Mounting: M4 x 0.7

Fluid body: 303 stainless steel or PEEK*

Fluid body nozzle size: Several nozzle orifice diameters

Ball-and-seat: Ceramic

Heater body: Aluminum

All stainless steel parts are passivated.
* Polyetheretherketone

"We are saving 2 to 4 hours on every 100 parts."

– Grimes Aerospace

Fluid Pressure Booster

Designed for micro-dispensing of thick materials.
See Tanks, Reservoirs, and Pumps for details.

www.nordsonefd.com/Pulse

PICO *Pµlse* Contact Valve

For use with:

- Adhesives
- Conductive Epoxies
- Food Colors
- Greases
- Underfills
- UV-cure Adhesives

Apply precise micro-deposits and control surge when dispensing lines and stripes with the PICO *Pµlse* contact dispense valve. Unique tip adapter assemblies allow use of a variety of dispensing tip types such as Optimum general purpose and specialty tips and DL Technology precision tips.

7362059 PICO *Pµlse* Contact Dispense Valve
For contact dispensing applications with cycle rates up to 1000Hz.

Features and Benefits

- Highly precise, repeatable, and faster contact dispensing
- Capability for high speed actuation up to 1000Hz* continuous
- Ideal for critical line dispensing and repeatable deposits as small as 0.5 nL
- Apply extremely small dots and well-defined lines with precise control of the beginning and end points
- Optional PEEK* wetted parts resist curing from reactive adhesives

* With approved conditional settings.

Specifications

Size: 22w x 120H x 75L mm (0.9w x 5H x 2.92"L)

Weight:
- With tip adapter / with cable: 538 g (19 oz)
- With tip adapter / without cable: 376 g (13.3 oz)
- Without tip adapter / with cable: 524 g (18.5 oz)
- Without tip adapter / without cable: 362 g (12.8 oz)

Maximum fluid pressure: 700 psi (49.0 bar)

Fluid inlet thread: M5

Mounting: M4 x 0.7

Tip adapter kits for HD contact valves: M2.5 X 0.45

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)

Fluid body nozzle size: Several nozzle orifice diameters

Ball-and-seat: Ceramic

Heater body: Aluminum

Tip adapter kits for HD contact valves: 303 stainless steel

All stainless steel parts are passivated.
* Polyetheretherketone

Fluid Pressure Booster

Designed for micro-dispensing of thick materials. See Tanks, Reservoirs, and Pumps for details.

Needle Nozzle Cleaning Station

Designed to automate the cleaning of needle valve dispensing tips and Liquidyn jetting nozzles. See Valve Accessories for details.

PICO PULSE FLUID BODY ASSEMBLIES

Nordson EFD offers a wide range of fluid bodies and cartridges that come together as matched sets to deliver the precise performance and repeatability needed to meet specific application requirements.

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.

- Type "D" seat: Standard version is suitable for most fluids and can result in less splashing of the deposit for low- to medium-viscosity fluids.
- Type "E" seat: Recommended for highly viscous/stringing type fluids, it generates more kinetic energy during jetting for better release off nozzle plate and less "tailing."

Consult EFD's Technical Service team for the best recommendation on Fluid Body Assembly/Seat Geometry for your application.

Fluid Body	Flat Nozzle Part #	PEEK Flat Nozzle Part #	P7 Extended Nozzle Part #*	P30 Extended Nozzle Part #*	Description	Orifice	Geometry	Ball Size
 Flat Nozzle	7362574	7363321	7362703	n/a	Fluid body assembly	50 µm	E	3.0S
	7362575	7363322	7362704	n/a	Fluid body assembly	100 µm	D	3.0S
	7362576	7363323	7362705	n/a	Fluid body assembly	200 µm	D	3.0S
 PEEK Flat Nozzle	7362577	7363324	7362706	7363238	Fluid body assembly	50 µm	E	5.0S
	7362578	7363325	7362707	7363239	Fluid body assembly	100 µm	E	5.0S
	7362579	7363326	7362708	7363240	Fluid body assembly	150 µm	E	5.0S
 P7 Extended Nozzle	7362580	7363327	7362709	7363241	Fluid body assembly	300 µm	E	5.0S
	7362581	7363328	7362710	7363242	Fluid body assembly	100 µm	D	5.0S
	7362582	7363329	7362711	7363243	Fluid body assembly	150 µm	D	5.0S
 P30 Extended Nozzle	7362583	7363330	7362712	7363244	Fluid body assembly	200 µm	D	5.0S
	7362584	7363331	7362713	7363245	Fluid body assembly	300 µm	D	5.0S
	7362585	7363332	7362714	7363246	Fluid body assembly	400 µm	D	5.0S
	7362586	7363333	7362715	7363247	Fluid body assembly	600 µm	D	5.0S

*Extended nozzles for use with *Pµlse* non-contact jet valves only

PICO PULSE CONTACT VALVE TIP ADAPTER KITS*

Part	Part #	Description
	7362028	Luer lock tip adapter kit for EFD General Purpose dispense tips
	7362030	DL Technology tip adapter kit
	7361969	Specialty plate adapter kit for legacy accessories

*Tip adapter kits for use with *Pµlse* contact jet valves only

PICO PULSE FLUID INLET FITTINGS

Part	Part #	Description
	7362606	Fitting: M5 x female Luer lock, straight, stainless steel (includes Viton O-ring) 7361303: O-rings: 5 x 1 mm, Viton, 10 pc 7361681: O-rings: 5 x 1 mm, FFKM, 3 pc
	7363340	Fitting: M5 x female luer lock, straight, PEEK (includes FFKM O-ring) 7361303: O-rings: 5 x 1 mm, Viton, 10 pc 7361681: O-rings: 5 x 1 mm, FFKM, 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

PICO PULSE EXTENSION CABLES

Extension cable sets include a power cable and a communication cable for connection to the PICO *Tομch* Controller. Includes one each for power and communication.

Cable	Part #	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

ACCESSORIES

Part	Part #	Description
	Varies	HP High-Pressure Dispensing Tool. Used to jet very thick assembly fluids such as RTV silicones, epoxies, and medical-grade adhesives.
	7361770	HP3cc Adapter Kit for use with PICO *Pμlse*.
	7361771	HP5cc Adapter Kit for use with PICO *Pμlse*.
	7361772	HP10cc Adapter Kit for use with PICO *Pμlse*.
	7362459	HP Adapter Kit for use with PICO *Pμlse*, straight fitting.
	7362543	HP Adapter Kit for use with PICO *Pμlse*, 90º elbow.
	7361630	Latch release tool. Opens the piezo actuator heater body; useful for installations with limited access to the valve.
	7361295	PICO *Pμlse* Valve Cleaning Kit. Includes brushes, swabs, mini-reamers, and magnifying loupe.

PICO *Touch* Controller

The *Touch* controller uses a touchscreen and visual interface to greatly simplify setup and operation, while allowing precise adjustment of parameters such as open and close times. Easily integrate unprecedented control, precision, and performance into any dispensing application.

Features and Benefits

- Intuitive, easy-to-use touchscreen interface for precise control of PICO *Pulse* valve
- 480 x 272 resolution for sharper screen visibility
- More exact adjustment of valve parameters and performance
- Fine-tune dispensing performance by setting ramp open and close parameters and stroke control from the unique Wave Profile screen
- Flexibility to control the dispense of a wide range of fluids and viscosities
- Programmable lockout to prevent unintended changes to settings

Specifications

Cabinet size: 14.2W x 13.3H x 16.8D cm (28 Hp x 3U) 5.6W x 5.25H x 6.6"D

Weight: 2.6 kg (5.5 lb)

Input AC (to power supply): 100–240 VAC +/-10%, 50–60 Hz, 2A

Output DC (from power supply): 24VDC, 6.25 Amp

Internal voltage: 150 VDC, 24 VDC, 5 VDC, and 3.3 VDC

Feedback circuit: 0-24 VDC

Initiate circuit: 5-24 VDC

Time range: 100 µs to 9.9999 s

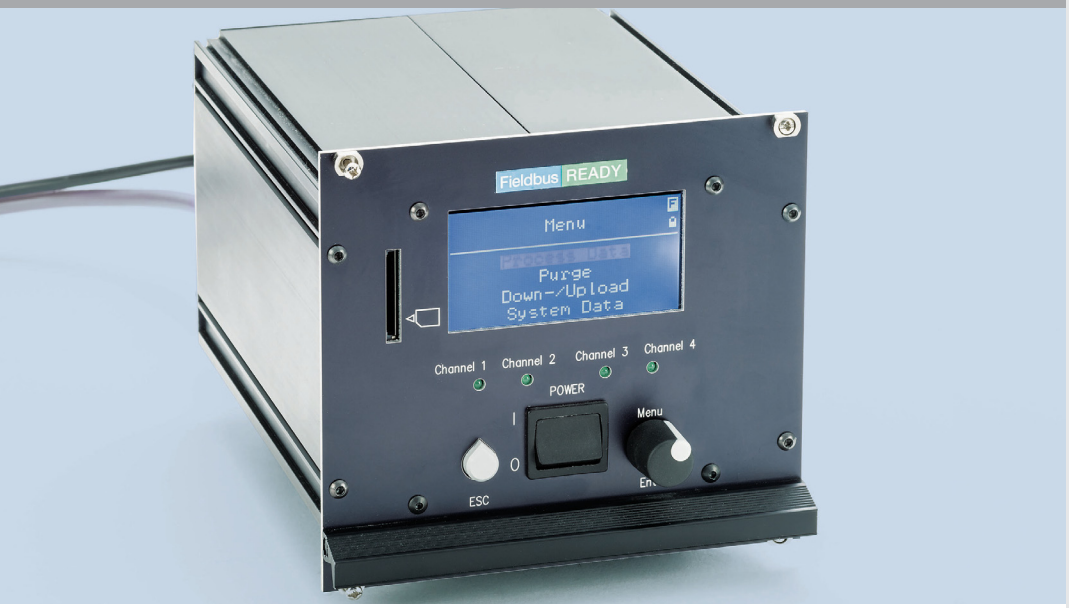
Approvals: CE, RoHS, WEEE, & China RoHS Compliant

7361217 PICO *Touch* Controller
For use with a PICO *Pulse* valve only, the controller system includes a power cord, USB cable, back shell, connector, and power supply.

"Nordson EFD's wide variety of products, and the numerous applications they can be used for, is impressive. It makes it easy to select the right products for the applications we're working on."

– Nye Lubricants

Process Generators (V2/V3 Controllers)



Nordson EFD offers two types of process generators to use with the PICO *Toμch* Controller when multiple lines of programming are needed to achieve specific deposit patterns in some applications. Both produce a high-precision 24 V dispensing signal of 0.2 ms or less. The efficiency and reproducibility of piezoelectric valves, particularly with small quantities and/or high dosing frequencies, is maximized.

Features and Benefits

- Centralized PC or PLC control of parameter settings for more efficient operation
- Application results are maintained over time with a high degree of precision
- Ability to document operating parameters and to block local changes by operators increases operational reliability (V3 model only)
- Included CAN protocol adapts to many fieldbus protocols (V3 model only)

PICO Controller V2

The PICO Controller V2 allows only local changes to the operating parameters via its function buttons and menu item selections. Available in 2 channels, upgradeable to 4 channels.

PICO Controller V3

The PICO Controller V3 provides all the features and benefits of the PICO V2 plus the capability to communicate with higher-level systems via standard fieldbus connection, expanding its functionality for complex dispensing jobs. Available in 2 channels and 4 channels.

Optional housing provides convenient mounting for controllers and drivers. Optional V3-Kit available with PROFIBUS communicator.

Specifications

PICO V2/V3 Controllers

Cabinet size: 14.2W x 12.9H x 17.1D cm
(5.6W x 5.1H x 6.7"D)

Weight: 1.5 kg (3.3 lb)

Material: Aluminum, black anodized

Degree of protection: IP20

Voltage supply: 24 V DC ± 10%

Power consumption (without load):
2 channel variation: maximum 1.7 W
4 channel variation: maximum 2.5 W

Liquidyn P-Jet CT and P-Dot CT

For use with:

- Anaerobics
- Epoxies
- Fluxes
- Glues
- Greases
- Silicones
- Sealing Lacquers
- UV-cure Adhesives

The Liquidyn® P-Jet and P-Dot pneumatic jet valves deliver precise, consistent non-contact dispensing of low- to high-viscosity fluids with micro-deposits starting at 3 nL. Both feature easily exchangeable dispensing nozzles, tappets, and fluid inlet fittings to meet a wide range of application requirements. Rigorously tested to withstand highly-industrial environments, the Liquidyn P-Jet and P-Dot also feature a low cost of ownership.

7825004 Liquidyn P-Jet CT Actuator
Suitable for low- to medium-viscosity fluids with cycle rates of up to 280Hz.

7825002 Liquidyn P-Dot CT Actuator
Suitable for medium- to high-viscosity fluids with cycle rates of up to 150Hz.

Features and Benefits

- Highly repeatable and accurate non-contact jet dispensing
- Micro-deposit dispensing at frequencies up to 280Hz
- Separate wetted parts allow for simplified service and maintenance
- Modular design makes it easy to customize for different applications

Fluid Pressure Booster

Designed for micro-dispensing of thick materials. See Tanks, Reservoirs, and Pumps for details.

Laser Light Barrier

Detect each fluid deposit dispensed by your Nordson EFD Liquidyn jetting valve. See Valve Accessories for details.

Needle Nozzle Cleaning Station

Designed to automate the cleaning of needle valve dispensing tips and Liquidyn jetting nozzles. See Valve Accessories for details.

Specifications

Liquidyn P-Dot CT

Size: 38.6W x 126.7H x 61L mm
(1.5W x 5H x 2.4"L)

Liquidyn P-Jet CT

Size: 20W x 138.5H x 78.5L mm
(0.8"W x 5.5"H x 3"L)

Weight: 270 g (9.5 oz)

Maximum fluid pressure: 1450 psi (100 bar)

Fluid inlet thread: M8 x 1, flat sealing

Mounting: M3 x 25

Maximum operating frequency: 280Hz

Pulse time: Starting at 2 ms

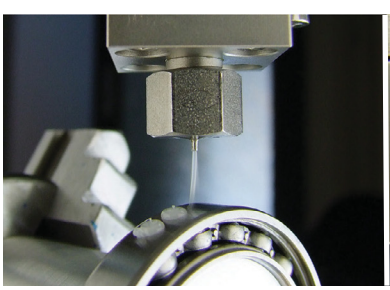
Input air pressure: 3–8 bar (44–116 psi)

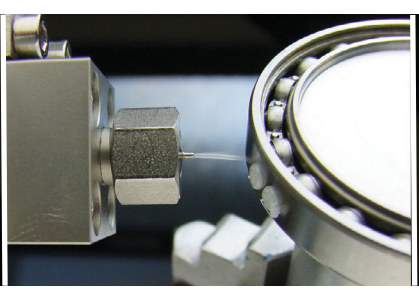
Fluid body: 303 stainless steel or PEEK (P-Jet only)

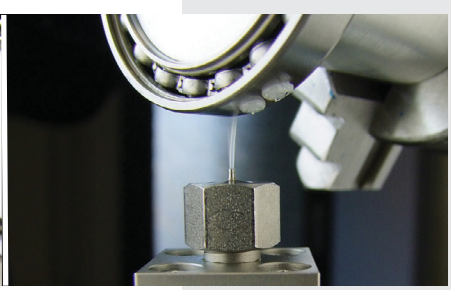
Heater body: Aluminum

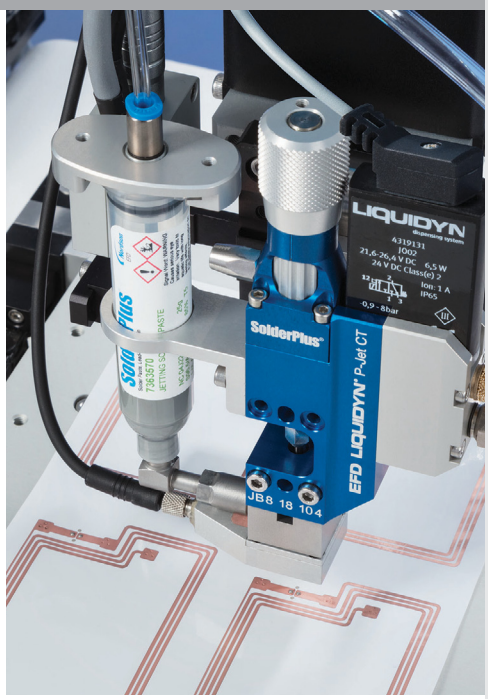
Approvals: CE

www.nordsonefd.com/PJetCT









Liquidyn P-Jet SolderPlus

For use with:

EFD SolderPlus Solder Paste

Other Filled Materials

The Liquidyn P-Jet SolderPlus is a high performance jet valve system designed for the non-contact micro-dispensing of Nordson EFD SolderPlus solder paste and filled products. EFD's pre-qualified SolderPlus solder paste formulations save time and streamline implementation by delivering a complete solder paste jetting solution. Specialized ISO-certified SolderPlus solder paste formulations come in a wide variety of leaded and lead-free alloys.

7825923 Liquidyn P-Jet SolderPlus Actuator
Suitable for use with a wide variety of EFD SolderPlus pastes.

Features and Benefits

- Suitable for use with a wide variety of EFD SolderPlus pastes
- Volumes starting at 3 nL with deposits as small as 700 µm diameter
- Dispensing frequencies as high as 100Hz
- Pre-qualified SolderPlus solder paste formulations save time and streamline implantation
- Non-contact jet dispensing provides extremely repeatable, accurate fluid deposits

Specifications

Size: 20.0W x 138.5H x 78.5L mm (0.8W x 5.5H x 3.0"L)
Weight: 270.0 g (9.5 oz)
Maximum fluid pressure: 100 bar (1450 psi)
Fluid inlet thread: M8 x 1, flat sealing
Mounting: M3 x 25
Maximum operating frequency: 100Hz
Pulse time: Starting at 2 ms
Input air pressure: 3–8 bar (44–116 psi)
Fluid body: 303 stainless steel
Heater body: Aluminum
Approvals: CE

Fluid Pressure Booster

Designed for micro-dispensing of thick materials. See Tanks, Reservoirs, and Pumps for details.

Needle Nozzle Cleaning Station

Designed to automate the cleaning of needle valve dispensing tips and Liquidyn jetting nozzles. See Valve Accessories for details.

www.nordsonefd.com/PJetSolderPlus

LIQUIDYN JET VALVE COMPONENTS

The pneumatic jet valves can be uniquely configured to achieve the best dispensing result for your material and application. A Nordson EFD application specialist will help select the best valve system components for optimal jetting performance.

Part	Part #	Description	P-Dot CT	P-Jet CT	P-Jet SolderPlus
	7825024	Tappet P-Jet CT 40L x 2.0D mm, steel	—	✓	—
	7825028	Tappet P-Jet CT 40L x 2.0D mm, ceramic	—	✓	—
	7825033	Tappet P-Dot CT 27L x 2.0D mm, steel	✓	—	—
	7825034	Tappet nut P-Dot CT	✓	—	—
	7825922	Tappet, P-Jet SolderPlus, 1.25 mm, steel	—	—	✓
	7825189	NBR O-ring (gasket)	✓	✓	✓
	7825188	EPDM O-ring (gasket)	✓	✓	✓
	7825190	Viton O-ring (gasket)	✓	✓	✓
	7825230	Perlast O-ring (gasket)	✓	✓	✓
	7825037	Steel fluid body	✓	✓	✓
	7825038	Plastic fluid body	—	✓	—
	7825008	Drainage block	✓	—	—
	7825182	2.5 m (8.2 ft) M8 valve cable	✓	✓	✓
	7825011	Safety plate	✓	—	—

LIQUIDYN JET VALVE NOZZLES

Other selections are available. Please consult EFD's Technical Service team for available components.

Nozzle	Part #	Description	P-Dot CT	P-Jet CT	P-Jet SolderPlus
	7825063	Steel flat nozzle, 150 µm	✓	✓	—
	7825075	Steel needle nozzle, 150 µm	✓	✓	—
	7825919	Steel needle nozzle, 250 µm	—	✓	✓
	7825094	Plastic needle nozzle with steel tip, 150 µm	—	✓	—
	7825100	Plastic needle nozzle with PTFE tip, 200 µm	—	✓	—
	7825042	Hexagon retaining nut	✓	✓	✓
	7825044	Knurled retaining nut for plastic nozzles with tip	—	✓	—

LIQUIDYN JET VALVE FLUID FITTINGS

Fitting	Part #	Description	P-Dot CT	P-Jet CT	P-Jet SolderPlus
	7825149	Kit, standard nozzle heater	✓	✓	✓
	7825120	Steel luer lock adapter for syringe barrels	✓	✓	✓
	7825121	Plastic luer lock adapter for syringe barrels	—	✓	—
	7825137	Steel tube connector for 4 mm OD tubing	✓	✓	—
	7825136	Plastic tube connector for 3.2 mm OD tubing	—	✓	—

Key: ✓ Applicable — Not applicable

Liquidyn V200 Controller

The Liquidyn V200 controller provides safe, easy operation of the Liquidyn P-Jet CT, P-Dot CT, and P-Jet SolderPlus jet valves and greater control over dispensing outcomes. By providing control of dispensing parameters, the Liquidyn V200 makes it possible to optimize valve performance. Two precision pressure regulators and a digital display make it easy to adjust parameters to get the perfect deposit.

7825168 Liquidyn V200 Controller

Features and Benefits

- Programmable dispensing parameters — up to four programs
- Continuous shot operation up to 150Hz (P-Dot), 280Hz (P-Jet) and 25Hz (P-Jet SolderPlus)
- Continuous display of actual pressure and temperature readings
- Setpoint Counter sets the number of shots and shows the actual number of shots deposited

Specifications

Cabinet size: 450W x 125H x 250D mm
18W x 5H x 9"D

Weight: 5.5 kg (12.1 lb)

Cycle rate: Up to 280Hz

Time range: 2-9,999 ms

Electrical power input: 24 VDC, 2.5 Amp minimum

Electrical input connector: Lumberg KFV70

External power adapter: AC/DC power supply and power cord: 100–240 VAC, 50/60Hz, 1.4 Amp input; 24 VDC, 2.5 Amp, 60 W maximum output

Feedback circuit: 0 VDC (logical low), 24 VDC (logical high)

Input air pressure: 90–150 psi (6.2–10.3 bar)

Temperature control: 0–90° C (32–194° F)

Product classification: IP40, Protection Class III

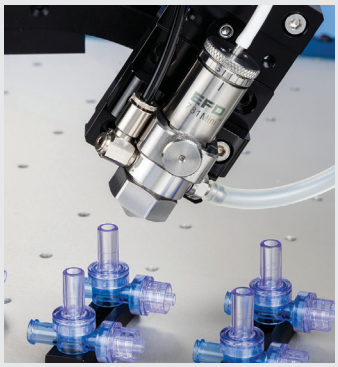
Approvals: CE, RoHS, WEEE, China RoHS

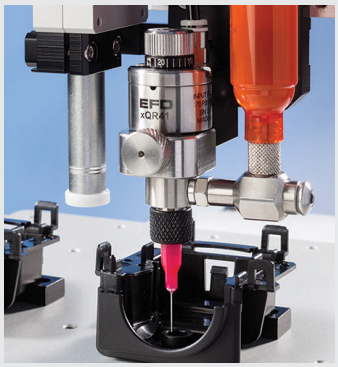
"The benefits of working with EFD include product support, product reliability, and a wide range of products to handle almost anything we encounter."

– Micro Instrument Corp.

Precision Valve Systems

Dispense / Spray / Controllers





Engineered for the most demanding mechanical and environmental applications, EFD valve systems provide reliable dispensing solutions for benchtop applications machine builders, and cost-effective drop-in retrofit alternatives for automatic production lines.

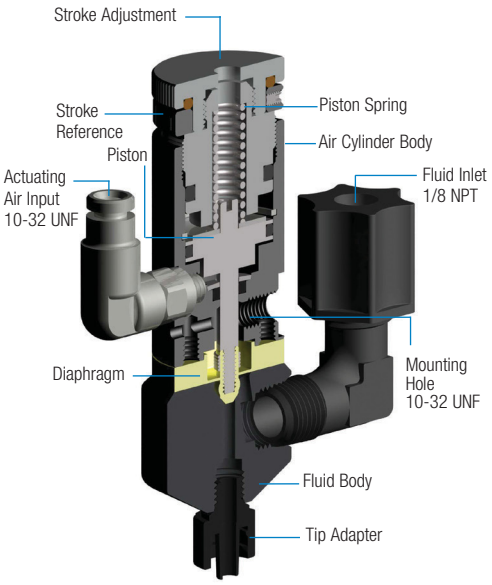
EFD offers a wide range of valves for dispensing almost any fluid, from thin solvents to thick sealants and braze pastes — in accurate, repeatable amounts.

Our unique valve designs are exceptionally reliable and will provide tens of millions of trouble-free dispensing cycles before maintenance is required.

Features and Benefits

- Reliable, low maintenance
- Fast cycle rates allow production lines to run at optimal speed
- Engineered for the most demanding production environments
- Clean, drip-free cutoffs reduce waste, mess, and cleanup
- Interactive microprocessor-based controllers simplify PLC settings and provide consistent operation
- Cost-effective replacement for older technology valves

Nordson EFD



752V Series Diaphragm Valve

For use with:

- Activators
- Anaerobics
- Cyanoacrylates
- Fluxes
- Solvents
- UV-cure & Light-cure Adhesives

General-purpose valve is ideal for dispensing controlled amounts of most low-to-medium viscosity fluids. Wetted components are machined from inert UHMW (Ultra High Molecular Weight) polyethylene, making the 752 Series ideal for use with cyanoacrylates, anaerobic threadlockers and other reactive fluids.

Features and Benefits

- Compact size and weight
- Adjustable fluid flow control
- Positive shutoff, no seals
- Low-maintenance design

BackPack

Also available with BackPack valve actuator to improve valve cycle time and process control. See Valve Accessories for details.

ValveMate 8000

Easily change deposit size settings of the valves with the ValveMate 8000 controller. See Valve Controllers for details.

Specifications

752V-UHSS
- Size: 80.7 mm length x 26.9 mm diameter (3.18" x 1.06")
- Weight: 173.6 g (6.1 oz)

752V-SS
- Size: 80.7 mm length x 26.9 mm diameter (3.18" x 1.06")
- Weight: 181.4 g (6.4 oz)

752V-DVD
- Size: 76.3 mm length x 26.9 mm diameter (3.00" x 1.06")
- Weight: 172.9 g (6.1 oz)

Actuating air pressure required: 70-90 psi (4.8-6.2 bar)

Maximum fluid pressure: 70 psi (4.8 bar)

Fluid inlet thread: 1/8 NPT female

Fluid outlet thread: 1/4-28 UNF

Mounting: (1) 10-32 UNF tapped hole

Cycle rate: Exceeds 500 per minute

Air cylinder body:
- 752V-UHSS: 303 stainless steel
- 752V-SS: 303 stainless steel
- 752V-DVD: Aluminum, hard-coat anodized

Fluid body: UHMW* polyethylene, FDA approved

Fluid body options: Acetal, 303 stainless steel, PTFE

Piston and piston rod: 303 stainless steel

Tip adapter: Polypropylene

Diaphragm: UHMW* polyethylene, FDA approved

Diaphragm option: PTFE

Wetted parts: Fluid body, diaphragm, tip adapter

All stainless steel parts are passivated.
*Ultra High Molecular Weight polyethylene

7021428 752V-UHSS Valve
Air cylinder body assembly is passivated 303 stainless steel. UHMW* fluid body and diaphragm. Includes fluid inlet fittings #7021499 and #7007038.

7021419 752V-SS Valve
Air cylinder body assembly is passivated 303 stainless steel. Acetal copolymer fluid body and UHMW* diaphragm. Includes fluid inlet fittings #7021499 and #7007038.

7021411 752V-DVD Valve
Air cylinder body assembly is hard-coat anodized aluminum. Tamper-resist stroke adjustment. UHMW* diaphragm and 303 stainless steel fluid body with integral tip adapter. Includes inlet fitting #7021499.

7021427 752V-UHDVD Valve
Same as 752V-DVD except fluid body is UHMW* with #7021443 tip adapter. Includes inlet fitting #7021499.

7021285 750V-SS Valve
Air cylinder body assembly is 303 stainless steel. UHMW* fluid body and diaphragm. Includes fluid inlet fitting #7021300.

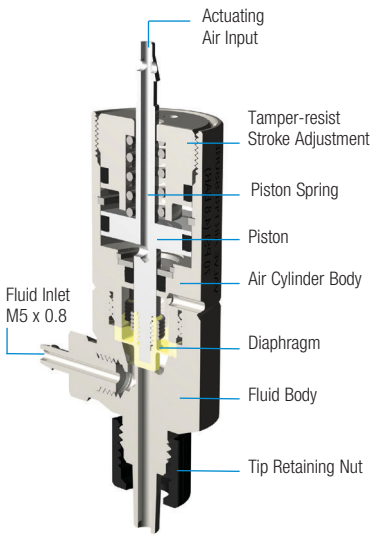
7015582 752V-SS-BP Valve
Air cylinder body assembly is 303 stainless steel. Acetal copolymer fluid body and UHMW diaphragm. Includes fluid fittings and BackPack valve actuator.

7015583 752V-UHSS-BP Valve
Air cylinder body assembly is 303 stainless steel. UHMW fluid body and diaphragm. Includes fluid fittings and BackPack valve actuator.

"Your 752V-UH valves are just great for cyanoacrylates. We replaced pinch-tube valves with yours, and our problems are gone!"

– Copreci

www.nordsonefd.com/752VSeries



702 Series
Mini-diaphragm Valve

For use with:

- Dyes
- Resins
- Solvents
- UV-cure Adhesives
- UV-cure Coatings
- UV-cure Lacquers

60% smaller and 70% lighter than typical dispense valves, the 702 Series is ideal for applications where space is tight or installation on movable arms where size and weight must be considered.

The 702M-SS applies consistent, precise deposits of dye, UV-cure lacquers, and UV-cure adhesives in the optical media industry.

The 702V is designed for drip-free coating and consistent shot-to-shot bonding of UV-cure adhesives and other low- to medium-viscosity fluids.

Features and Benefits

- Unique design eliminates trapped air and bubbles
- Tamper-resist stroke adjustments
- Quick, clean cutoff eliminates drips
- Faster throughput

Specifications

Size: 63.5 mm length x 19.1 mm diameter (2.50" x 0.75")

Weight (less fittings): 49.3 g (1.74 oz)

Actuating air pressure required: 70-90 psi (4.8-6.2 bar)

Maximum fluid pressure: 70 psi (4.8 bar)

Fluid inlet thread: M5 x 0.8

Mounting: Adjustable mounting block (#7020507)

Cycle rate: Exceeds 500 per minute

Air cylinder body: 303 stainless steel

Fluid body: 303 stainless steel

Piston: 303 stainless steel

Diaphragm: FDA approved UHMW* polyethylene or PTFE. Consult Nordson EFD for part number.

Tip retaining nut: Aluminum

All stainless steel parts are passivated.
*Ultra High Molecular Weight polyethylene

7020679 702M-SS Valve
For optical media applications. Air cylinder body and fluid body are made of passivated 303 stainless steel. UHMW diaphragm. Includes sample tip kit of PTFE-coated tips, (4) each of 21 and 23 gauge.

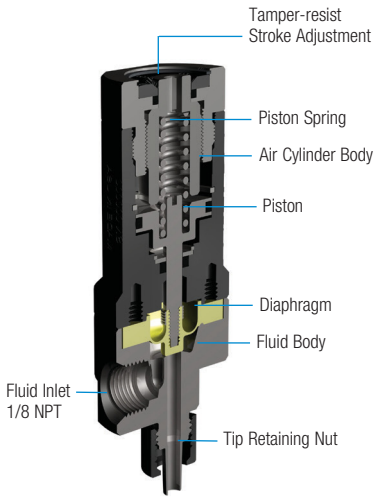
7020683 702V-SS Valve
For general industry applications. Air cylinder body and fluid body are made of passivated 303 stainless steel. UHMW diaphragm. Includes 1.5 m (5 ft) input air hose with male quick-connect and fluid inlet fitting, #7020671.

7020680 702V-A Valve
For dispensing UV cure, anaerobics, and certain cyanoacrylates. Fluid body is acetal copolymer with a 303 stainless steel air cylinder body. UHMW diaphragm. Acetal copolymer wetted parts are preferred when dispensing UV-cure adhesives, anaerobics, cyanoacrylates, and other fluids that might otherwise react when in contact with stainless steel. Includes 1.5 m (5 ft) input air hose with male quick-connect and fluid inlet fitting, #7020677.

ValveMate 8000

Easily change deposit size settings of the valves with the ValveMate 8000 controller. See Valve Controllers for details.

www.nordsonefd.com/702Series



752HF Series High Flow Diaphragm Valve

For use with:

- Resins
- UV-cure Adhesives
- UV-cure Coatings

The 752HF valve system is specifically designed for precise dispensing of UV-cure resins and similar fluids used in media manufacturing of Blu-Ray DVDs, DVDs, and CDs. Unrestricted material flow reduces turbulence and the formation of micro bubbles.

Features and Benefits

- High-flow capability for thicker UV-cure coatings
- Valve open time as short as 15 milliseconds
- Positive shutoff, no seals
- Compact and lightweight

Specifications

Size: 77.3 mm length x 28.6 mm diameter (3.04" x 1.13")

Weight (less fittings):
752HF-A: 81 g (2.85 oz)
752HF-SS: 123 g (4.30 oz)

Actuating air pressure required:
70-90 psi (4.8-6.2 bar)

Maximum fluid pressure: 70 psi (4.8 bar)

Fluid inlet thread: 1/8-27 NPT

Mounting: (1) M5 x 0.8

Cycle rate: Exceeds 500 per minute

Air cylinder body: Aluminum, hard-coat anodized

Fluid body:
752HF-A: Acetal copolymer
752HF-SS: 303 stainless steel

Piston: 303 stainless steel

Diaphragm: UHMW* polyethylene, FDA approved

Tip retaining nut: Aluminum

All stainless steel parts are passivated.
*Ultra High Molecular Weight polyethylene

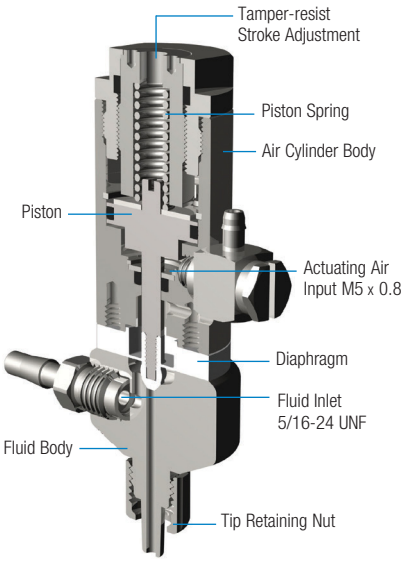
7014139 752HF-A Valve
Air cylinder body assembly and tamper-resist stroke reference knob are hard-coat anodized aluminum. Acetal copolymer fluid body and UHMW* diaphragm. Includes fluid inlet fittings #7021499 and #7007038.

7014315 752HF-SS Valve
Same as 752HF-A except fluid body is passivated 303 stainless steel.

ValveMate 8000

Easily change deposit size settings of the valves with the ValveMate 8000 controller. See Valve Controllers for details.

"We never expected these valves would work this great and be this reliable! Over 50 million cycles without maintenance!"
– Capitol Records



754V Series Aseptic Valve

For use with:

- Food Processing
- Optical Monomers
- Pill Coating
- Saline Solutions
- Solvents
- Vial Filling

The 754V aseptic valve features a smooth fluid flow path that is free of any entrapment areas. FDA-compliant wetted parts are made of 316L stainless steel and PTFE, making the valve suitable for CIP (Clean-In-Place) and SIP (Sterilize-In-Place) processes.

Features and Benefits

- Accurate, consistent shot size
- Clean cutoff eliminates drips
- Diaphragm life exceeds $1x10^8$
- Positive shutoff, no seals

Specifications

Size: 77.5 mm length x 26.9 mm diameter (3.05" x 1.06")

Weight: 193.3 g (6.82 oz)

Actuating air pressure required: 70-90 psi (4.8-6.2 bar)

Maximum fluid pressure: 70-90 psi (4.8-6.2 bar)

Fluid inlet thread: 5/16-24 UNF

Fluid outlet thread: Male luer lock

Mounting: None

Cycle rate: Exceeds 500 per minute

Air cylinder body: 316L stainless steel

Fluid body: 316L stainless steel

Piston and piston rod: 316L stainless steel

Tip adapter: Integrated, threadless

Diaphragm: PTFE

Wetted parts: Fluid body, diaphragm, tip adapter

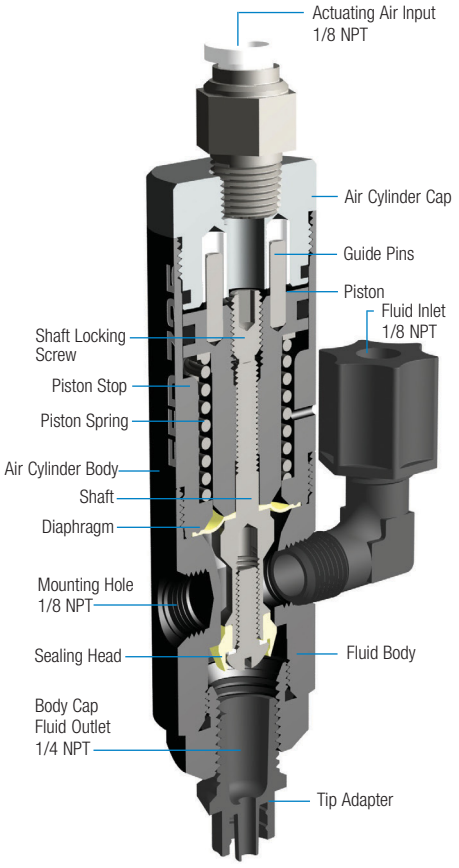
7021514 754V-SS Valve
Wetted components are made of 316L stainless steel and PTFE, to conform to biopharmaceutical regulations. Internal threads have been removed to provide a smooth, easily cleaned fluid flow path, free of entrapped areas. Fluid body is electro-polished to increase corrosion resistance.

754V valve includes 1.5 m (5 ft) input air hose with male quick-connect, barbed fluid inlet fitting, polypropylene tip adapter, and dispensing tip kit.

For Aseptic Spray Valves, see Spray Valves section.

ValveMate 8000
Easily change deposit size settings of the valves with the ValveMate 8000 controller. See Valve Controllers for details.

www.nordsonefd.com/754VSeries



725D Series Piston Valve

For use with:

- Braze Pastes
- Epoxies
- Greases
- Paste Fluxes
- RTV/Sealants
- Solder Resists

The 725D Series valve systems consistently dispense a wide range of medium to thick fluids, including greases and silicones.

The 725DA-SS provides stroke adjustment for both fluid flow and snuff-back control. The 725D-SS version is non-adjustable and provides fixed stroke travel.

Features and Benefits

- Positive shutoff
- Excellent chemical resistance
- End-of-cycle snuff-back
- Diaphragm life exceeds 50 million cycles

Specifications

725DA-SS (stroke adjustment)
Size: 152.4 mm length x 29.5 mm diameter (6.00" x 1.16")
Weight: 326 g (11.5 oz)

725D-SS (fixed stroke travel)
Size: 127 mm length x 28.4 mm diameter (5.00" x 1.12")
Weight: 279 g (9.85 oz)

Actuating air pressure required: 70-90 psi (4.8-6.2 bar)

Maximum input fluid pressure: 100 psi (7.0 bar)

Fluid inlet thread: 1/8 NPT female

Fluid outlet: 1/4 NPT female

Mounting: (1) 1/8 NPT female blind hole or adjustable mounting block

Air cylinder body: Aluminum, hard-coat anodized

Fluid body: 303 stainless steel

Piston: Aluminum, hard-coat anodized

Spring: Stainless steel

Sealing head/diaphragm: UHMW* polymer, FDA-approved

All stainless steel parts are passivated.
*Ultra High Molecular Weight polyethylene

7021014 725DA-SS Valve
Adjustable piston stroke provides fine-tuning of fluid flow rate and pullback volume. UHMW* diaphragm and sealing head. Fluid body and body cap are passivated 303 stainless steel. Includes fluid inlet fittings #7021499 and #7007038 and dispensing tip kit.

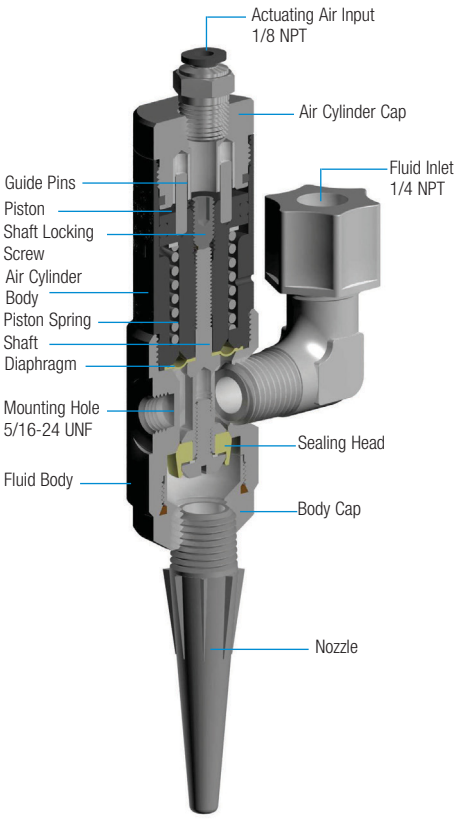
7021009 725D-SS Valve
Fluid body and body cap are passivated 303 stainless steel. UHMW* diaphragm and sealing head. Includes fluid inlet fittings #7021499 and #7007038.

ValveMate 8000

Easily change deposit size settings of the valves with the ValveMate 8000 controller. See Valve Controllers for details.

"Watching EFD valves is boring. And that's great. They just keep working and working."
– Peavey Electronics

www.nordsonefd.com/725DSeries



725HF Series
High Flow Piston Valve

For use with:

- Adhesives
- Cosmetics
- Creams
- Greases
- Lubricants
- Inks
- Sealants

Dispenses a wide variety of fluids at rates up to 450 ml/second. Use to fill small bottles, vials, and foil packs with lotions, perfumes, and adhesives. Also used for dispensing braze pastes and potting electrical connectors.

Features and Benefits

- FDA-compliant wetted parts
- Fully adjustable flow rates
- ±1° repeat fill tolerance
- Low-maintenance design

Specifications

725HF-SS
Size: 108.7 mm length x 31.2 mm diameter (4.28" x 1.23")
Weight: 309 g (10.9 oz)

725HF-A
Size: 109.2 mm length x 31.2 mm diameter (4.30" x 1.23")
Weight: 185 g (6.5 oz)

Actuating air pressure required: 70-90 psi (4.8-6.2 bar)
Maximum fluid pressure: 100 psi (7.0 bar)
Fluid inlet thread: 1/4 NPT
Fluid outlet thread: 1/4 NPT
Mounting: (1) 5/16 UNF or adjustable mounting block
Cycle rate: Exceeds 400 per minute
Air cylinder body: Aluminum, hard-coat anodized
Fluid body: 303 stainless steel or acetal copolymer
Piston: Aluminum, hard-coat anodized
Spring: Stainless steel
Sealing head/diaphragm: UHMW* polymer, FDA-approved

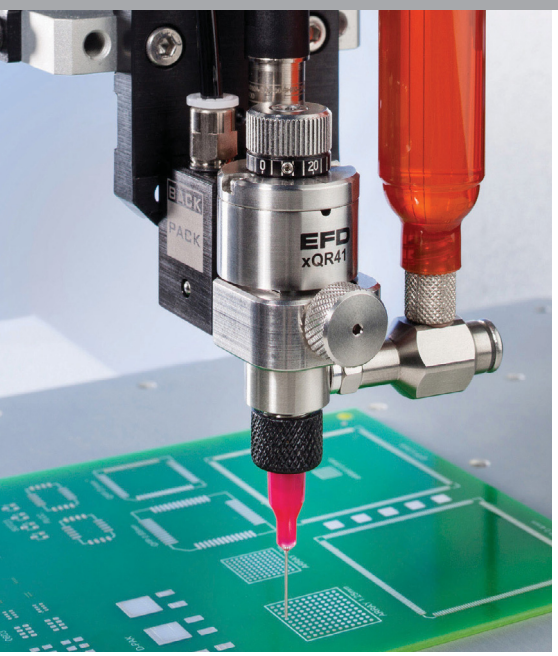
All stainless steel parts are passivated.
*Ultra High Molecular Weight polyethylene

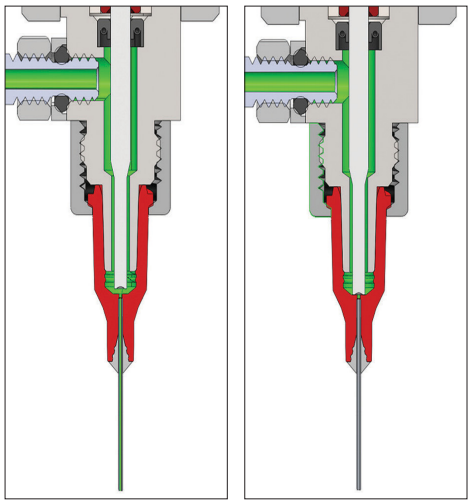
7021020 725HF-SS Valve
Hard-coat anodized aluminum air cylinder body assembly with passivated 303 stainless steel fluid body and shaft. UHMW* diaphragm and sealing head. Includes 1.5 m (5 ft) input air hose with male quick-connect, fluid inlet fitting #7021038 tip adapter, and two #7018554 disposable polyethylene nozzles.

7021015 725HF-A Valve
Same as 725HF-SS except wetted parts are acetal copolymer, UHMW* polyethylene and PTFE-coated stainless steel. Includes 1.5 m (5 ft) input air hose with male quick-connect, fluid inlet fitting #7021038, tip adapter, and (2) #7018554 disposable polyethylene nozzles.

ValveMate 8000
Easily change deposit size settings of the valves with the ValveMate 8000 controller. See Valve Controllers for details.

www.nordsonefd.com/725HFSeries





Open Closed

xQR41 Series MicroDot Valve

For use with:

- Anaerobics**
- Cyanoacrylates**
- Epoxies
- Fluxes
- Lubricants
- Primers
- Silicone Oils
- Solvents
- UV-cure & Light-cure Adhesives

The xQR41 Series MicroDot™ valve is a pneumatically operated, adjustable, modular valve designed to apply precise micro-deposits of low- to high-viscosity fluids.

Ideal for automated assembly processes that require small dispensing tips, the xQR41 valve provides exceptional control as well as the absolute minimum dead fluid volume. Its modular design makes it adaptable to a variety of specific applications.

Features and Benefits

- 60% smaller form factor
- QR (Quick Release) clasp for fast, easy serviceability
- Exchangeable, modular design
- Consistent microdots as small as 150 µm (0.15 mm) (0.006") diameter
- Optional PEEK* wetted parts resist curing from reactive adhesives

Specifications

Size: 66 mm length x 23.7 mm diameter (2.60" x 0.930")

Weight: 141.35 g (5.0 oz)

Actuating air pressure required: 70–90 psi (4.8–6.2 bar)

Maximum fluid pressure: 100 psi (7.0 bar)

Fluid inlet: M5

Fluid outlet: Luer taper with retaining nut

Mounting: M4 (BackPack actuator or Mounting Block)

Cycle rate: Exceeds 400 per minute

Air cylinder body: 303 stainless steel

Fluid body: 303 stainless steel or PEEK

Piston: 303 stainless steel

Needle: 303 stainless steel or PEEK

Tip retaining nut: Hard-coated aluminum

SafetyLok collar: Hard-coated anodized aluminum

All stainless steel parts are passivated.
* Polyetheretherketone
** Conditional use with PEEK wetted parts

BackPack

Also available with BackPack valve actuator to improve valve cycle time and process control. See Valve Accessories for details.

Needle Nozzle Cleaning Station

Designed to automate the cleaning of needle valve dispensing tips and Liquidyn jetting nozzles. See Valve Accessories for details.

ValveMate 8000

Easily change deposit size settings of the valves with the ValveMate 8000 controller. See Valve Controllers for details.

xQR41 with BackPack

Includes fluid inlet fittings #7020671 and #7361411

7360817
Includes adjustable stroke control.

7361761
Includes adjustable stroke control and PEEK wetted parts.

7360821
Includes adjustable stroke control and bullet-end needle.

7360819
Includes non-adjustable cap.

7361762
Includes non-adjustable cap and PEEK wetted parts.

xQR41 with Mounting Block

Includes fluid inlet fittings #7020671 and #7361411

7360824
Includes adjustable stroke control.

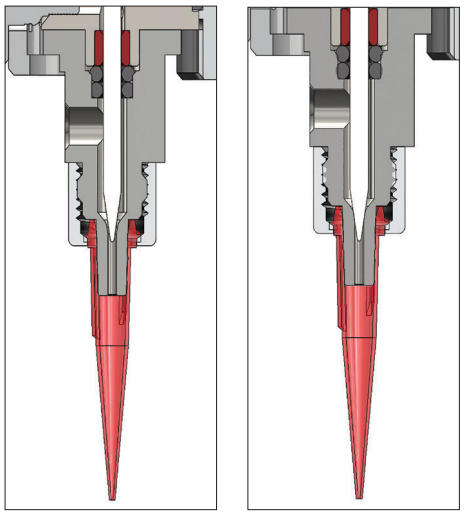
7361763
Includes adjustable stroke control and PEEK wetted parts.

7360823
Includes adjustable stroke control and bullet-end needle.

7360825
Includes non-adjustable cap.

7361764
Includes non-adjustable cap and PEEK wetted parts.

www.nordsonefd.com/xQR41Series



Open Closed

xQR41V Series Needle Valve

For use with:

- Accelerators
- Marking Inks
- Silicone Oils
- Solvents
- UV-cure & Light-cure Adhesives

The xQR41V Series needle valve is a pneumatically operated, adjustable, modular valve designed to apply precise amounts of low- to high-viscosity fluids.

The valve's 60% smaller form factor and modular design allow for greater customization to meet specific application requirements. Its compatibility with all Nordson EFD dispensing tips make it adaptable to a wide variety of fluid applications.

Features and Benefits

- 60% smaller form factor
- QR (Quick Release) clasp for fast, easy serviceability
- Exchangeable, modular design
- Use with full range of Nordson EFD dispensing tips

Specifications

Size: 64 mm length x 23.7 mm diameter (2.5" x 0.93")

Weight: 115 g (4.1 oz)

Actuating air pressure required: 70–90 psi (4.8–6.2 bar)

Maximum fluid pressure: 100 psi (7.0 bar)

Fluid inlet: M5

Fluid outlet: Luer taper with retaining nut

Mounting: M4 (BackPack actuator or Mounting Block)

Cycle rate: Exceeds 400 per minute

Air cylinder body: 303 stainless steel

Fluid body: PEEK*

Piston: 303 stainless steel

Needle: 303 stainless steel

Tip retaining nut: Hard-coated aluminum

SafetyLok collar: Hard-coated anodized aluminum

All stainless steel parts are passivated.
* Polyetheretherketone

BackPack

Also available with BackPack valve actuator to improve valve cycle time and process control. See Valve Accessories for details.

Needle Nozzle Cleaning Station

Designed to automate the cleaning of needle valve dispensing tips and Liquidyn jetting nozzles. See Valve Accessories for details.

ValveMate 8000

Easily change deposit size settings of the valves with the ValveMate 8000 controller. See Valve Controllers for details.

xQR41V with BackPack

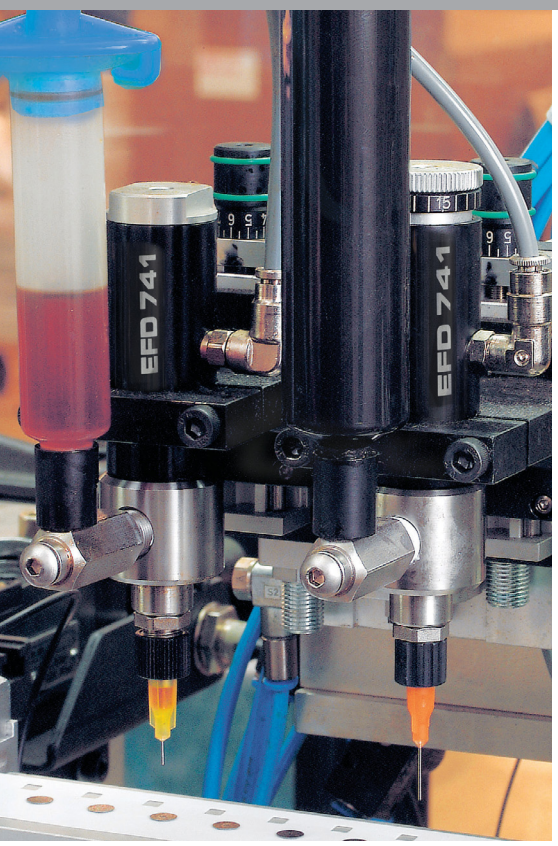
Includes fluid inlet fittings #7020671 and #7361411.

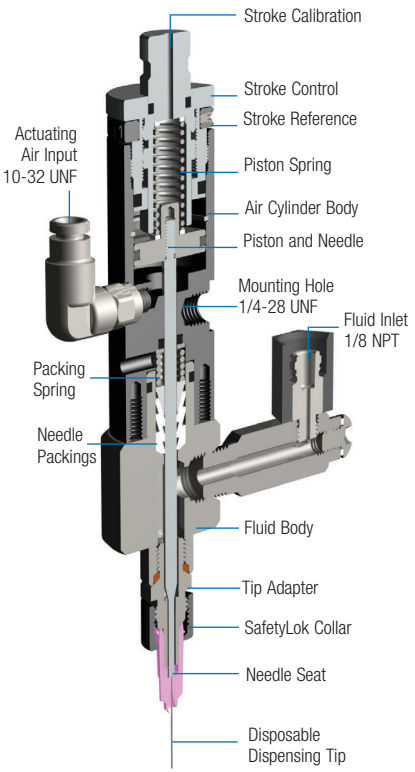
7362489
Includes adjustable stroke control.

xQR41V with Mounting Block

Includes fluid inlet fittings #7020671 and #7361411.

7362488
Includes adjustable stroke control.





741MD-SS Series MicroDot Valve

For use with:

- Epoxies
- Lubricants
- Marking Inks
- Solvents
- UV-cure & Light-cure Adhesives

The MicroDot valve is a pneumatically operated adjustable needle valve designed to apply very precise deposits down to fractions of a microliter.

Ideal for automated assembly processes, the 741MD-SS valve has an adjustable needle stroke with a unique calibration feature that allows the user to maintain exact deposit size.

Features and Benefits

- Zero dead fluid volume
- Easy calibration; short setup time
- Consistent microdots as small as 0.18 mm (0.007") diameter
- Unaffected by entrapped air in fluids

BackPack

Also available with BackPack valve actuator to improve valve cycle time and process control. See Valve Accessories for details.

Needle Nozzle Cleaning Station

Designed to automate the cleaning of needle valve dispensing tips and Liquidyn jetting nozzles. See Valve Accessories for details.

ValveMate 8000

Easily change deposit size settings of the valves with the ValveMate 8000 controller. See Valve Controllers for details.

Specifications

Size: 127.5 mm length x 26.9 mm diameter (5.02" x 1.06")

Weight: 251 g (9.0 oz)

Actuating air pressure required: 70-90 psi (4.8-6.2 bar)

Maximum fluid pressure: 100 psi (7.0 bar)

Fluid inlet thread: 1/8 NPT female

Fluid outlet: Luer taper with retaining nut

Mounting: 1/4-28 UNF tapped hole

Cycle rate: Exceeds 400 per minute

Air cylinder body: Aluminum, hard-coat anodized

Fluid body: 303 stainless steel

Piston: 303 stainless steel

Needle: 303 stainless steel

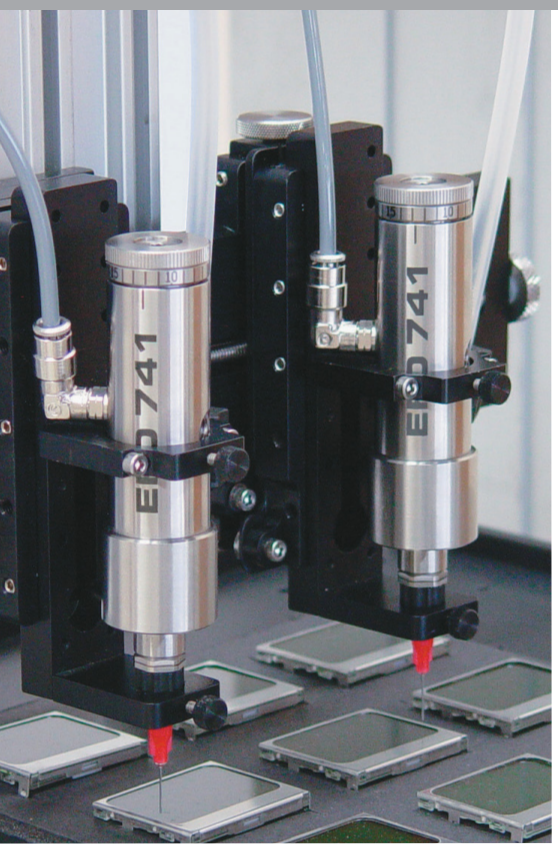
Tip adapter: 303 stainless steel

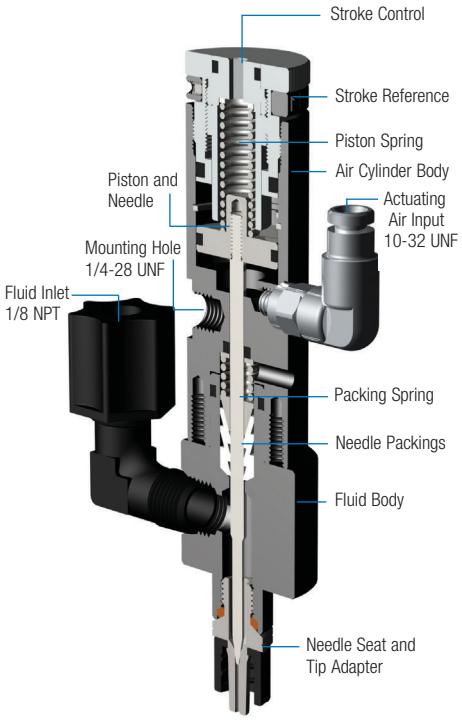
EFD SafetyLok collar: Aluminum, hard-coat anodized

All stainless steel parts are passivated.

7021233 741MD-SS Valve
Fluid body is passivated 303 stainless steel. Air cylinder body assembly is hard-coat anodized aluminum. Includes fluid inlet fittings #7021499 and #7007038.

7015585 741MD-SS-BP Valve
Fluid body is passivated 303 stainless steel. Air cylinder body assembly is hard-coat anodized aluminum. Includes fluid inlet fittings and BackPack valve actuator.





741V Series Needle Valve

For use with:

- Accelerators
- Marking Inks
- Silicone Oils
- Solvents
- UV-cure Adhesives

Precision needle valve applies low viscosity fluids in accurate, repeatable amounts. Because the stainless steel needle seats in the tip adapter, there is virtually no dead fluid volume between shots.

Features and Benefits

- Low-maintenance design
- Zero dead fluid volume
- Positive shutoff

Specifications

Size: 114.6 mm length x 26.9 mm diameter (4.51" x 1.06")

Weight: 317.5 g (11.2 oz)

Actuating air pressure required: 70-90 psi (4.8-6.2 bar)

Maximum input fluid pressure: 300 psi (20.7 bar)

Fluid inlet thread: 1/8 NPT female

Fluid outlet: Male luer lock

Mounting: 1/4-28 UNF tapped hole

Cycle rate: Exceeds 400 per minute

Air cylinder body: 303 stainless steel

Fluid body: 303 stainless steel

Piston: 303 stainless steel

Needle: 303 stainless steel

Tip adapter/needle seat: 303 stainless steel

SafetyLok collar: Nylon

Needle packings: PTFE

All stainless steel parts are passivated.

7007029 741V-SS Valve
Air cylinder and fluid body is passivated 303 stainless steel. Includes fluid inlet fittings #7021499 and #7007038.

7021239 741V-SS-TR Valve
Same as 741V-SS but tamper resistant.

7015584 741V-SS-BP Valve
Air cylinder and fluid body is passivated 303 stainless steel. Includes fluid inlet fittings and BackPack valve actuator.

BackPack

Also available with BackPack valve actuator to improve valve cycle time and process control. See Valve Accessories for details.

Needle Nozzle Cleaning Station

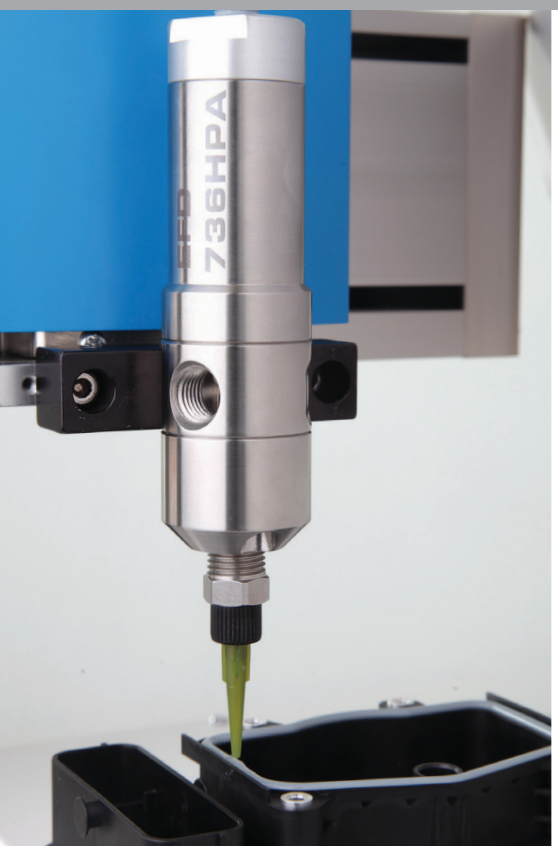
Designed to automate the cleaning of needle valve dispensing tips and Liquidyn jetting nozzles. See Valve Accessories for details.

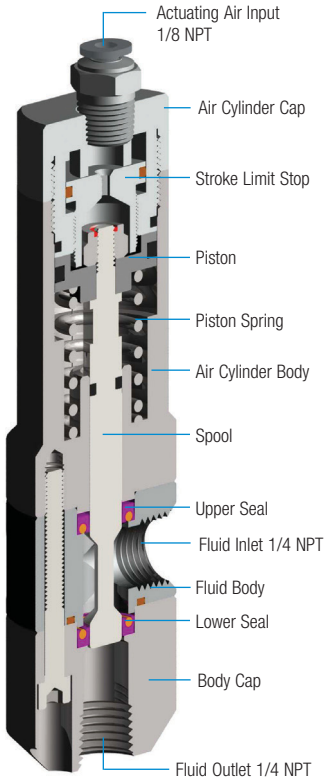
ValveMate 8000

Easily change deposit size settings of the valves with the ValveMate 8000 controller. See Valve Controllers for details.

"After we installed your valve system on our automatic assembly machines, the dripping – and the complaints – ended."
– A.T. Cross Company

www.nordsonefd.com/741VSeries





736HPA-NV Series High Pressure Valve

For use with:

- Adhesives
- Greases
- Sealants
- Silicones

Stainless steel balanced spool valve applies uniform amounts of thick materials like greases and silicones at pressures up to 2500 psi (172 bar).

To keep dots and lines consistent and prevent drooling between shots, the 736HPA-NV valve uses an adjustable stroke control to regulate opening surge and closing snuff-back.

Features and Benefits

- Opening surge control
- Adjustable snuff-back cutoff
- Auxiliary air inlet air-assist closure
- Cycle rate exceeds 400/minute

Specifications

Size: 134.4 mm length x 35.1 mm diameter (5.29" x 1.38")

Weight (less fittings): 544 g (19.2 oz)

Actuating air pressure required: 70-90 psi (4.8-6.2 bar)

Maximum fluid pressure: 2500 psi (172 bar)

Fluid inlet thread: 1/4 NPT female

Mounting: (1) 5/16-24 UNF tapped hole or adjustable mounting block

Cycle rate: Exceeds 400 per minute

Air cylinder body: 303 stainless steel

Fluid body and outlet cap: 303 stainless steel

Piston: Aluminum, hard-coat anodized

Spool: Stainless, hard chrome coated

Spool seals: Polyester elastomer

Wetted parts: Spool, spool seals, fluid body, body cap

All stainless steel parts are passivated.

7013449 736HPA-NV Valve
Chromium-plated spool
Fluid body and air cylinder body are passivated 303 stainless steel with a chromium-plated spool. The fluid inlet and outlet threads are 1/4 NPT female.

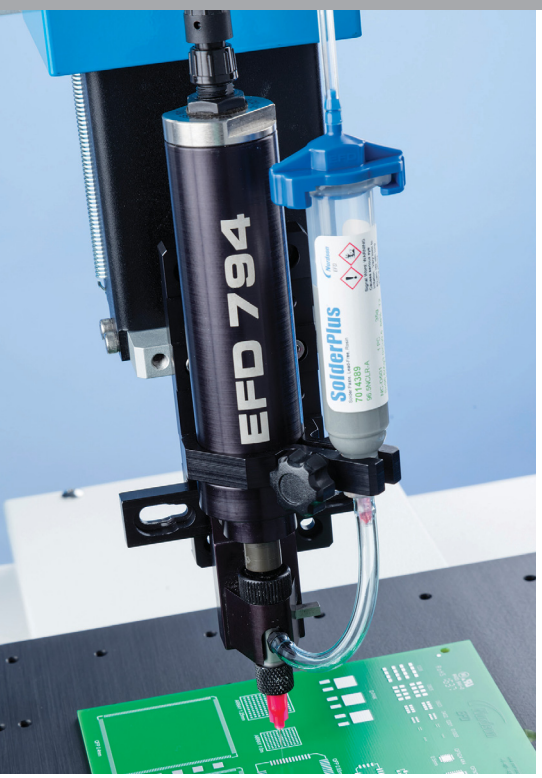
7028951 736HPA-NV Valve
Titanium nitride-coated spool
Fluid body and air cylinder body are passivated 303 stainless steel with a titanium nitride-coated spool. The fluid inlet and outlet threads are 1/4 NPT female.

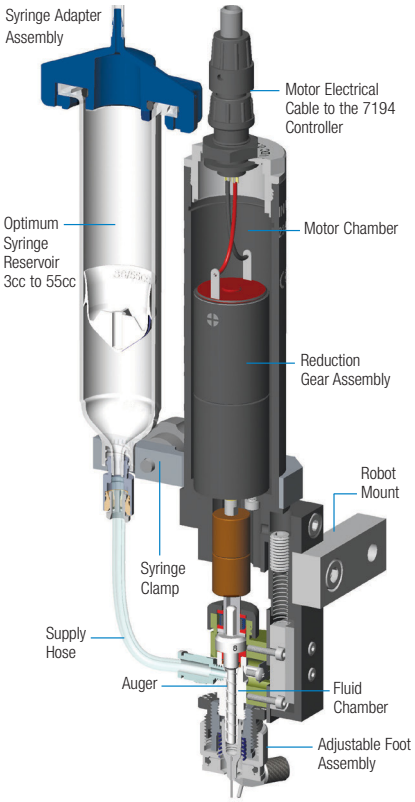
High pressure fluid inlet fittings are not supplied by EFD. They are available from the pump supplier. Specify inlet size 1/4 NPT.

ValveMate 8000

Easily change deposit size settings of the valves with the ValveMate 8000 controller. See Valve Controllers for details.

Auger Valves





794 Series Auger Valve

For use with:

- Particle-filled Materials
- Silver Epoxies
- Solder Pastes
- Thermal Greases

"We've gone from 30 minutes to 4 minutes to solder an assembly. I look like a hero for introducing this."

– Automotive Assembly

The 794 auger valve uses screw feed technology with precision time and pressure controls to dispense accurate, repeatable amounts of particle-filled materials.

The 794 auger valve is available with two motor types. Brush motors are best for lines and stripes and deposit cycle rates under 60-90 shots per minute. Brushless motors are best for high-speed, high cycle rate microdot applications.

Features and Benefits

- Adjustable auger speed
- Two motor types — brush or brushless
- Fixed head version for lines and stripes
- Sliding head/footed tip version maintains consistent dispense gap when dispensing on surfaces with irregular height.

Specifications

Size: 237.5 mm length x 31.8 mm diameter (9.35" x 1.25")

Weight: 544 g (19.2 oz)

Fluid chamber: 440C hardened stainless steel

Auger: 440C hardened stainless steel

"U" cup: Filled PTFE, spring energized

Liquid feed fitting: 304 stainless steel 10-32 UNF x 5/32 (push-in optional: polypropylene)

Auger speed: 250-500 RPM based on voltage input

Auger pitch: 8 and 16 pitch auger

Input voltage: 12-24 VDC (<10% ripple)

Input air: 0-30 psi (0-2.07 bar) clean, dry and filtered

Maximum acceleration: 2g

All stainless steel parts are passivated.

Brushless Motor Style

7029743 794-SB Valve
Auger valve, 8 pitch, brushless motor, sliding head, footed tip.

7029742 794-FB Valve
Auger valve, 8 pitch, brushless motor, fixed head.

7029744 794-SB-16 Valve
Auger valve, 16 pitch, brushless motor, sliding head.

7029463 794-FB-16 Valve
Auger valve, 16 pitch, brushless motor, fixed head.

Brush Motor Style

7021916 794-SR Valve
Auger valve, 8 pitch, brush motor, sliding head, footed tip.

7029745 794-FR Valve
Auger valve, 8 pitch, brush motor, fixed head.

7021917 794-SR-16 Valve
Auger valve, 16 pitch, brush motor, sliding head, footed tip.

7029746 794-FR-16 Valve
Auger valve, 16 pitch, brush motor, fixed head.

ValveMate 7194
The 7194 Series controller regulates solder feed pressure, dispense time, and auger speed of the 794 Series valve. See Valve Controllers for details.

Learn more about EFD custom-made solder pastes. See Solder Products for details.

www.nordsonefd.com/794VSeries

794-TC Series Auger Valve

For use with:

Thermal Interface Materials (TIM)

Highly Abrasive Pastes

The 794-TC Series auger valve system is designed to make precise, repeatable deposits and patterns of thermal interface materials (TIM) or other highly abrasive pastes. Its robust tungsten carbide (TC) auger screw and fluid body liner resist wear from highly abrasive pastes to ensure long valve life.

The 794-TC auger valve is available in two auger screw gap sizes to ensure best valve performance based on TIM particle size. The TC auger assembly can be easily replaced to change the gap size as needed.

Features and Benefits

- Fast, tool-free release of wetted parts
- Wear-resistant tungsten carbide wetted parts for higher production output
- Adjustable flow rate
- Adjustable auger speed
- Robust tungsten carbide auger screw and fluid body to ensure long valve life

Specifications

Size: 61 length x 32 mm diameter (2.4 x 1.25")

Weight: 470 g (16.6 oz)

Auger speed (dry): 170–400 rpm based on voltage input

Auger pitch: High flow

Input voltage: 10–24 VDC (<10% ripple)

Maximum acceleration: 2 g (0.07 oz)

Maximum continuous current: 240 mA (Time delay fuse recommended)

Maximum fluid pressure: 30 psi (2 bar)

Fluid inlet: 1/8" ID tubing supplied for connection

Mounting: 10-32, low profile

Luer lock tip adapter assembly: 303 stainless steel

Fluid inlet tube: 303 stainless steel

Fluid cartridge liner: Tungsten carbide

Auger: Tungsten carbide

Approvals: China RoHS

All stainless steel parts are passivated.

Brush Motor Style

7363511 794-TC Valve 0.05 mm
8 pitch, brush motor, 0.05 mm (0.002") gap – recommended for particle size < 20 µm.

7363512 794-TC Valve 0.10 mm
8 pitch, brush motor, 0.10 mm (0.004") gap – recommended for fluids with large particles < 40 µm.

ValveMate 7194 Controller
The ValveMate 7194 controller series regulates TIM feed pressure, dispense time, and auger speed. See valve controllers for details.

Learn more about EFD thermal interface materials. See Thermal Compound for details.

www.nordsonefd.com/794-TC

Radial Spinner Systems

Radial Spinner System

For use with:

- Anaerobics
- Cyanoacrylates
- Lubricants
- Silicone Gels
- Solvents

The Radial Spinner System applies consistent amounts of adhesives, lubricants, and other production fluids inside cylindrical parts between 10.2 mm (0.4") and 127 mm (5") in diameter.

The system combines a compact air-driven motor with a low maintenance EFD dispense valve and ValveMate controller. The valve dispenses a precisely metered amount of fluid onto a spinning disk attached to the motor. As fluid reaches the edge of the disk, it spins off, forming a neat band inside the part.

7021798 7860C-RS
Air Motor Bracket Assembly
Radial spinner motor/bracket assembly. Includes all hoses, #7021844 tip kit and #7021448 rotating luer lock tip adapter.

7021795 7860C
Radial spinner air motor only.

Note: Valves purchased separately. We recommend 752V Series Diaphragm Valves for use with the Radial Spinner System.

Features and Benefits

- Applies correct amount on every part
- Applies material in correct location
- Eliminates waste, mess, and rework
- Operates in vertical or horizontal position

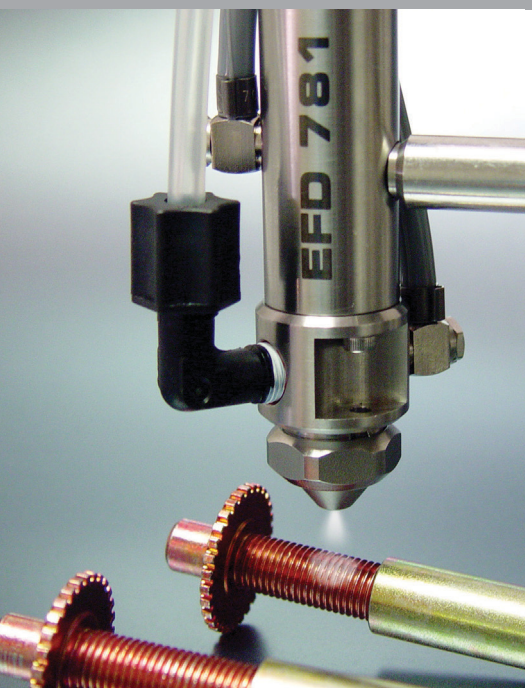
RADIAL SPINNER / DISC ASSEMBLIES	
Shaft length is 70 mm (2.75") x 3.18 mm (0.125") diameter	
Part #	Description
7021842	7880-9MM: 9 mm (0.354") radial spinner/disc
7021836	7880-12MM: 12 mm (0.473") radial spinner/disc
7021838	7880-15MM: 15 mm (0.590") radial spinner/disc
7021840	7880-19MM: 19 mm (0.745") radial spinner/disc
DISPENSING TIPS	
Part #	Description
7021846	18 gauge needle – 30 degree bend 20/box
7021848	21 gauge needle – 30 degree bend 20/box
7021850	23 gauge needle – 30 degree bend 20/box
7021844	Tip kit: Includes (2) each of 18, 21, and 23 gauge bent tips
7021448	Tip adapter: Rotating luer lock tip for 752V valve

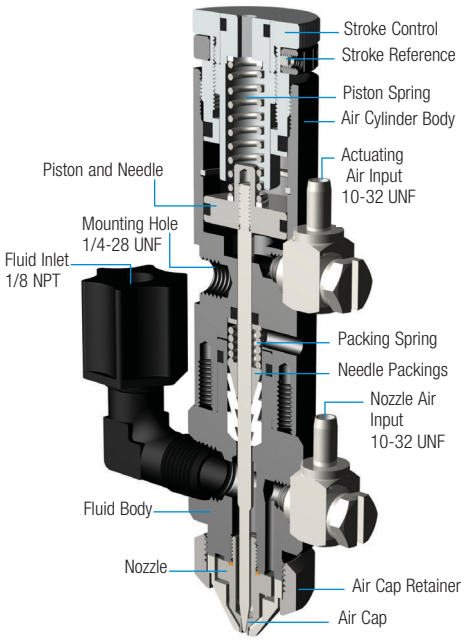
ValveMate 7160RA
The ValveMate 7160RA controller provides exact control to the radial spinner system. See Valve Controllers for details.

"In manufacturing, reliability is everything. That's what we get from EFD valves. If all our equipment worked as well…our jobs would be easier."

– Ford Motor Company

www.nordsonefd.com/RadialSpinner





781S Series General Purpose Spray Valves

For use with:

- Activators
- Coatings
- Greases
- Inks
- Liquid Fluxes
- Oils
- Silicones
- Solvents

The 781S Series Low Volume Low Pressure (LVLP) spray systems apply consistent coatings of low- to medium-viscosity fluids exactly where needed.

Microliter to milliliter amounts can be reliably dispensed in round patterns with diameters ranging from 4.3 to 50.8 mm (0.17" to 2.0") and in fan patterns with widths up to 165.1 mm (6.5").

Features and Benefits

- Consistent area of coverage
- No clogging, dripping or drying out
- No overspray, no mist, no bounce
- Adjustable nozzle air

Specifications

Size: 104.6 mm length x 26.9 mm diameter (4.12" x 1.06")

Weight:
781S-SS: 405.3 g (14.2 oz)
781S: 235.3 g (8.2 oz)

Actuating air pressure required:
70 to 90 psi (4.8-6.2 bar)

Maximum fluid pressure: 300 psi (20.7 bar)

Fluid inlet thread: 1/8 NPT female

Mounting: (1) 1/4-28 UNF tapped hole

Cycle rate: Exceeds 400 per minute

Air cylinder body:
781S-SS: 303 stainless steel
781S: Aluminum, hard-coat anodized

Fluid body:
781S-SS: 303 stainless steel
781S: Aluminum, hard-coat anodized

Air cap: 303 stainless steel

Piston: 303 stainless steel

Needle and nozzle: 303 stainless steel

Needle packings: PTFE

All stainless steel parts are passivated.

7007031 781S-SS Spray Valve
Nozzle size is 1.17 mm (0.046") diameter. Round pattern, narrow angle. All metal parts are passivated 303 stainless steel.

7021616 781S-SS-TR
Same as 781S-SS, except with tamper-resist stroke.

7021615 781S-SS-46F
Nozzle size is 1.17 mm (0.046") diameter, fan shape. All metal parts are passivated 303 stainless steel.

7021618 781S-SS-WF
Same as 781S-SS-46F except wide fan pattern is 2x the width.

7021613 781S-SS-28
Nozzle size is 0.71 mm (0.028") diameter. Round pattern, narrow angle. All metal parts are passivated 303 stainless steel.

7021614 781S-SS-28F
Nozzle size is 0.71 mm (.028") diameter, fan shape. All metal parts are passivated 303 stainless steel.

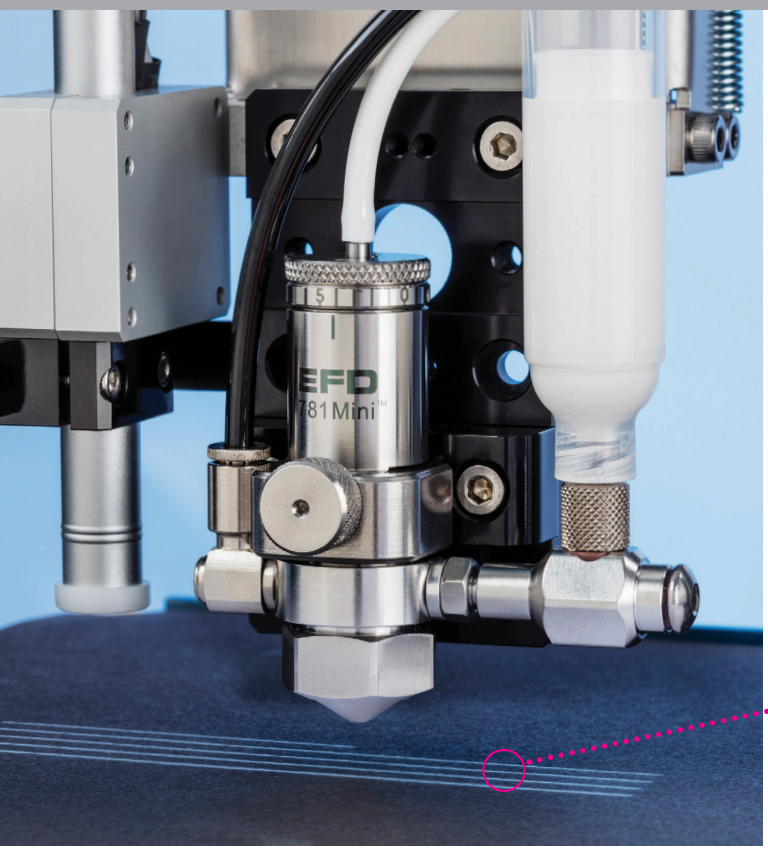
7021611 781S-SS-14
Nozzle size is 0.36 mm (0.014") diameter. Round pattern, narrow angle. All metal parts are passivated 303 stainless steel.

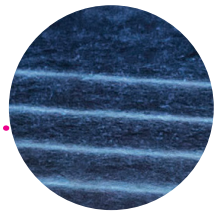
7021612 781S-SS-14F
Nozzle size is 0.36 mm (0.014") diameter, fan shape. All metal parts are passivated 303 stainless steel.

7021617 781S-SS-WA
Same as 781S-SS except round pattern is 2x as large.

ValveMate 8040

The ValveMate 8040 controller provides Low Volume Low Pressure air to the nozzle of the 781S Series valve for high transfer efficiency. See Valve Controllers for details.





Narrow spray patterns as small as 1 mm wide

781Mini Series Spray Valve

For use with:

- Activators
- Coatings
- Inks
- Light Greases
- Liquid Fluxes
- Oils
- Silicone Oils
- Solvents

The 781Mini™ precision Low Volume Low Pressure (LVLP) spray valve's innovative design produces an exceptionally more uniform, narrower spray pattern than previously possible.

Its 60% smaller form factor allows it to dispense in tighter, more complex spaces, and to mount more valves per fixture plate for increased throughput.

Features and Benefits

- Improved uniformity for better accuracy and finer edge definition
- Narrower spray patterns as small as 1 mm (0.04") wide
- QR (Quick Release) clasp for tool-free serviceability in seconds
- High transfer efficiency with no overspray

Specifications

Size: 71.4 mm length x 22.4 mm diameter (2.88" x 0.9")

Weight: 141 g (5.0 oz)

Actuating air pressure required: 70 to 90 psi (4.8-6.2 bar)

Maximum fluid pressure: 100 psi (7.0 bar)

Fluid inlet thread: M5

Mounting: M4

Cycle rate: Exceeds 400 per minute

Air cylinder body: 303 stainless steel

Fluid body: 303 stainless steel

Air cap: 303 stainless steel

Piston: 303 stainless steel

Needle: 303 stainless steel

Needle packings: Double O-rings

Maximum operating temperature: 102° C (215° F)

All stainless steel parts are passivated.

7364002 781Mini-0.01" Valve
Features a 0.254 mm (0.01") nozzle orifice.
Round pattern, narrow angle.

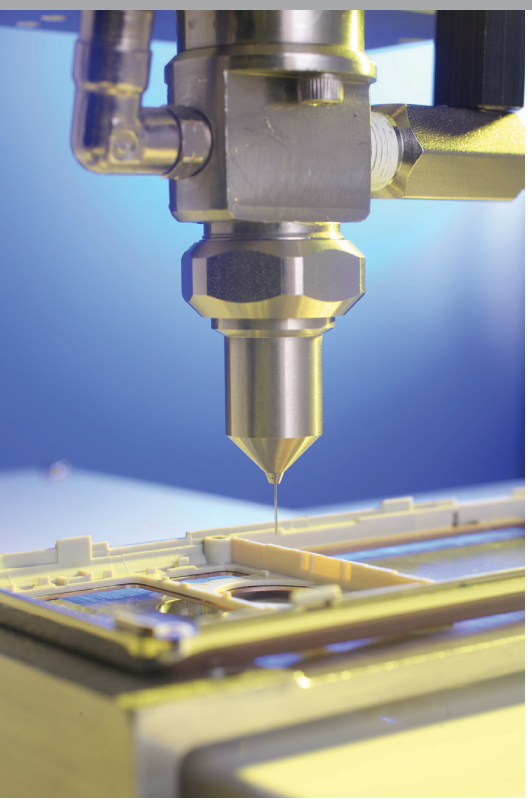
7362301 781Mini-0.03" Valve
Features a 0.76 mm (0.03") nozzle orifice.
Round pattern.

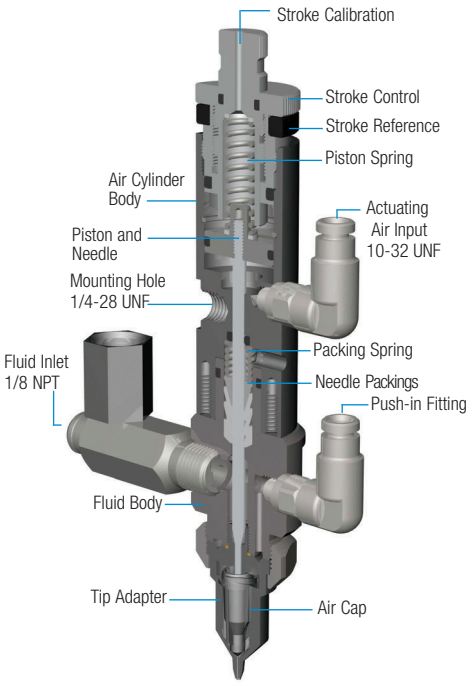
ValveMate 8040

The ValveMate 8040 controller provides exact control to the 781Mini spray valve, giving it exceptional spray pattern definition. See Valve Controllers for details.

"Finally, we found a valve that does what the manufacturer said it would. Simple. Compact. Reliable. No waiting or costly downtime for spare parts, either."
– Oxford International Ltd.

www.nordsonefd.com/781MiniSpray





787MS-SS Series MicroSpray Valve

For use with:

- Activators
- Coatings
- Inks
- Liquid Fluxes
- Oils
- Silicones
- Solvents

The 787MS-SS precision spray valve uses Low Volume Low Pressure (LVLP) technology to produce uniform spray patterns between 3.3 mm (0.130") and 19.1 mm (0.75") in diameter.

Innovative design uses a small gauge 0.3 mm–0.1 mm (0.013"–0.004") ID disposable dispensing tip in place of a standard spray nozzle. This concentrates the LVLP air used to atomize the coating into uniform spray patterns as small as 3.3 mm (0.130") in diameter — over 30% smaller than EFD's standard spray valve configuration.

Features and Benefits

- High transfer efficiency
- No overspray or mist
- Consistent spray pattern
- Faster throughput

Specifications

Size: 131.6 mm length x 26.9 mm diameter (5.18" x 1.06")

Weight: 336 g (11.8 oz)

Actuating air pressure required: 70 to 90 psi (4.8-6.2 bar)

Maximum fluid pressure: 100 psi (7.0 bar)

Fluid inlet thread: 1/8 NPT female

Mounting: 1/4-28 UNF tapped hole

Cycle rate: Exceeds 400 per minute

Air cylinder body: 303 stainless steel

Fluid body: 303 stainless steel

Piston: 303 stainless steel

Needle: 303 stainless steel

Air cap: 303 stainless steel

Free flow orifice: 33 ga (0.004"; 0.10 mm) to 23 ga (0.013"; 0.33 mm)

Needle packings: PTFE

Maximum operating temperature: 102° C (215° F)

All stainless steel parts are passivated.

7029409 787MS-SS Valve with Centering Air Cap
Accommodates Tip Centering Guide. Includes spray tip kit, air hoses, fluid inlet fitting, barrel reservoirs, and adapter assembly for reservoir pressure.

7012549 787MS-SS Valve
Does not accept Tip Centering Guide.

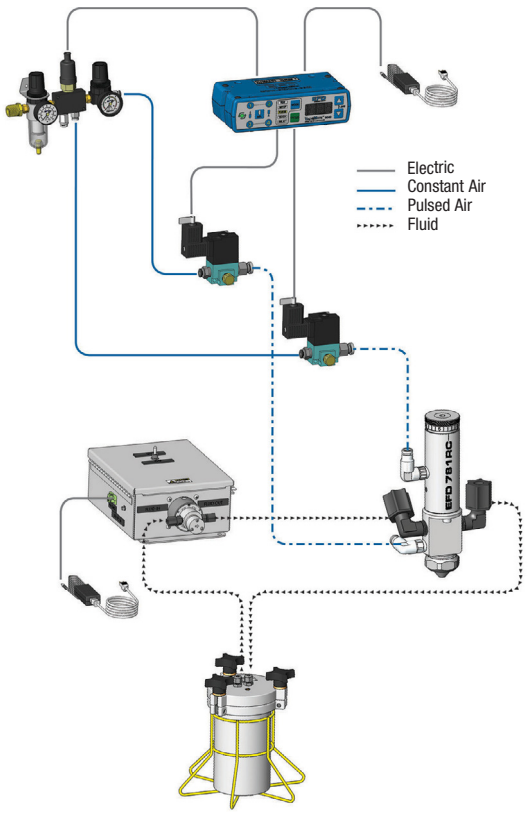
ValveMate 8040

The ValveMate 8040 controller provides exact control to the 787MS-SS valve, giving it exceptional spray pattern definition. See Valve Controllers for details.

TIP CENTERING GUIDE

The Tip Centering Guide ensures proper alignment of the dispensing needle in critical spray applications. Order components separately.

Part #	Description
7027984	Replacement air cap
7027985	Centering Guide, 27/33ga
7029405	Centering Guide, 23ga
7029406	Centering Guide, 25ga
7029407	Centering Guide, 30ga
7029408	Centering Guide, 32ga



781RC-SS Recirculating Spray Marking System

For use with:

- Marking Inks
- Paints
- Other Fluids that Separate

The 781RC MicroMark® Recirculating Spray Marking System produces uniform round patterns and stripes from 5.0 mm to 30.4 mm (0.20" to 1.20") wide without clogging or overspray.

This unique marking system eliminates the clogging, maintenance, and downtime encountered with standard marking systems by using a recirculating pump to keep pigments in suspension and a programmable air delay after each cycle to clean the spray nozzle.

This MicroMark system can be used to color-code similar components, indicate pass/fail, or show production or test status. It can be activated manually or interfaced with other systems to mark at scheduled intervals.

Features and Benefits

- No clogging, dripping or drying out
- Keep pigments in suspension
- No mist or overspray
- Consistent size and placement

Specifications

Valve

Size: 104.6 mm length x 26.9 mm diameter (4.12" x 1.06")
Weight: 235.3 g (8.2 oz)
Actuating air pressure required: 70 to 90 psi (4.8-6.2 bar)
Maximum fluid pressure: 300 psi (20.7 bar)
Fluid inlet thread: 1/8 NPT female
Mounting: (1) 1/4-28 UNF tapped hole
Cycle rate: Exceeds 400 per minute
Air cylinder body, fluid body, air cap, piston and needle, and nozzle: 303 stainless steel
Needle packings: PTFE

All stainless steel parts are passivated.

Pump Enclosure

Cabinet size: 25.4$_L$ x 20.3$_W$ x 10.2$_D$ cm (10$_L$ x 8$_W$ x 4"$_D$)
Weight: 6.5 kg (14.6 lb)
Input AC (to power supply): 100-240 VAC, 50/60Hz
Power requirements: 24 VDC, 2.0 Amp maximum

Pump

Flow capacity: Up to 88 liters per hour
Weight: 0.4 kg (13.6 oz)
Power input: 24 VDC, 2.0 Amp maximum
Wetted materials:
Pump body: 303 stainless steel
Gears: PEEK
Gasket: PTFE

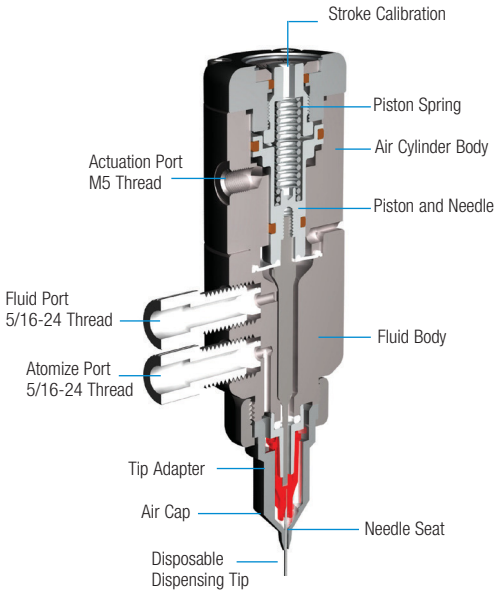
The complete recirculating spray marking system includes the 781RC-SS spray valve, the ValveMate 8040 controller with single in-line solenoid, recirculation pump enclosure assembly, 1-liter reservoir and all necessary air and fluid hoses with fittings. Available in two nozzle sizes. See below.

7013915 781RC-SS System 0.014"
Recirculation spray valve with 0.36 mm (0.014") diameter nozzle. Round pattern, narrow angle. All metal parts are passivated 303 stainless steel.

7013769 781RC-SS System 0.028"
Same as #7013915 recirculation spray valve but with 0.71 mm (0.028") diameter nozzle. Round pattern, narrow angle. All metal parts are passivated 303 stainless steel.

7023895 MM781-SYS System
For fluids not requiring recirculation, select MicroMark System MM781-SYS. Includes spray valve, ValveMate 8040 controller, solenoid valve kit and 1-liter tank reservoir.

"I can't express how maintenance-free these valves have made our jobs. Thank you."
– Harman



784S-SS Series 316L Stainless Steel Aseptic Spray Valve

For use with:

- Saline Solutions
- Silicone Oils
- Solvents
- Stent Coatings

Using Low Volume Low Pressure (LVLP) technology, the 784S-SS aseptic spray valve system accurately controls the application of most low- to medium-viscosity fluids. The 784S-SS aseptic spray valve uses a small gauge dispensing tip to produce uniform round spray patterns between 0.130" and 0.75" (3.3 mm and 19.1 mm) in diameter. For a wider area of coverage, the 784S-SS-F with fan air cap is available.

The unique design of the 784S-SS provides a fluid flow path free of any entrapment areas, critical for sterile and aseptic fluid applications. Wetted parts are 316L stainless steel and PTFE, which are suitable for CIP (Clean-In-Place) and SIP (Sterilize-In-Place) processes.

Features and Benefits

- Easy to clean or sterilize in place
- FDA-compliant wetted parts
- Low-maintenance design
- Positive shutoff, no seals

Specifications

Size: 96.3 mm length x 31.5 mm diameter (3.79" x 1.24")

Weight: 430 g (15.2 oz)

Actuating air pressure required: 70 to 90 psi (4.8-6.2 bar)

Maximum fluid pressure: 25 psi (1.7 bar)

Fluid inlet thread: 5/16-24 UNF tapped hole

Cycle rate: Exceeds 400 per minute

Air cylinder body: 316L stainless steel

Fluid body: 316L stainless steel

Piston: 316L stainless steel

Needle: 316L stainless steel

Air cap: 316L stainless steel

Maximum operating temperature: Autoclaving 260° C (500° F)

All stainless steel parts are passivated.

ValveMate 8040

The ValveMate 8040 controller provides excellent spray control to the 784S-SS Series valve. See Valve Controllers for details.

7361024 784S-SS Valve with Centering Air Cap
Accommodates Tip Centering Guide. Includes spray tip kit, air hoses, fluid inlet fitting, barrel reservoirs, and adapter assembly for reservoir pressure.

7012988 784S-SS Valve
Microspray valve with 316L stainless steel parts and round pattern air cap. Does not accept Tip Centering Guide.

7013000 784S-SS-F Valve
Microspray valve with 316L stainless steel parts and fan pattern air cap. Does not accept Tip Centering Guide.

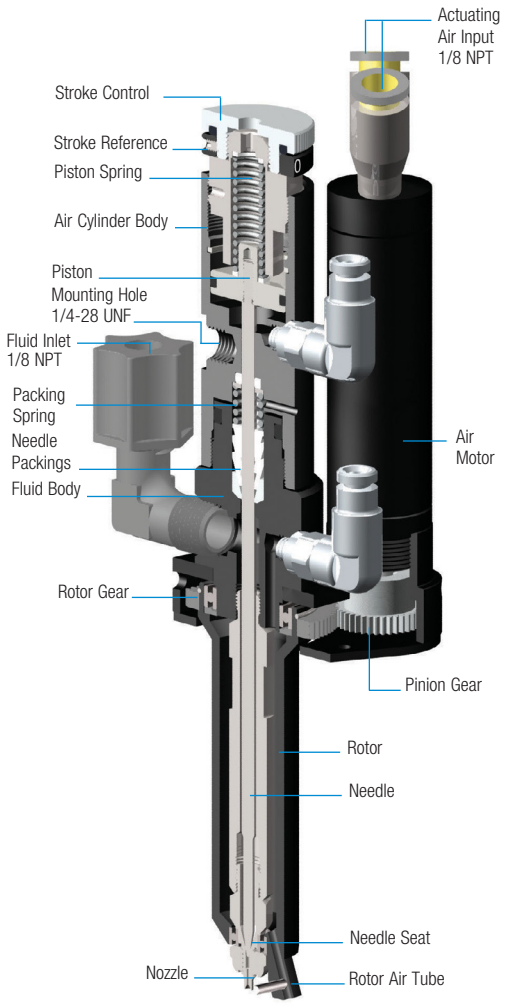
For Aseptic Dispense Valves, see Diaphragm Valves section.

TIP CENTERING GUIDE

The Tip Centering Guide ensures proper alignment of the dispensing needle in critical spray applications. Order components separately.

Part #	Description
7361023	Replacement air cap
7029405	Centering Guide, 23ga
7029406	Centering Guide, 25ga
7027985	Centering Guide, 27/33ga
7029407	Centering Guide, 30ga
7029408	Centering Guide, 32ga

www.nordsonefd.com/784Series



782RA Series Radial Spray Valve

For use with:

- Accelerators
- Activators
- Lubricants
- Primers
- Solvents

"Your valve did such a good job there's no reason to look elsewhere. I know it works."
– DLS Automation

Unique design uses a precision air motor and Low Volume Low Pressure technology to apply a uniform coating of lubricants, primers and other low- to medium-viscosity fluids inside cylinders 25.4 mm to 304.8 mm (1" to 12") in diameter.

Features and Benefits

- Adjustable nozzle air
- High transfer efficiency
- Self-adjusting PTFE packings
- No mist or overspray

Specifications

Size: 174.5 mm length x 53.8 mm diameter (6.87" x 2.12")

Weight: 480.8 g (16.9 oz)

Motor air consumption: <0.3 SCFM at 80 psi (5.4 bar)

Nozzle air consumption: 1.5 SCFM at 30 psi (2.1 bar)

Actuating air pressure required: 70 to 90 psi (4.8-6.2 bar)

Maximum fluid pressure: 300 psi (20.7 bar)

Fluid inlet thread: 1/8 NPT female

Mounting: 1/4-28 UNF tapped hole

Cycle rate: Exceeds 300 per minute

Air cylinder body: Aluminum, hard-coat anodized

Fluid body: Aluminum, hard-coat anodized

Piston: 303 stainless steel

Needle and nozzle: Stainless steel

Needle packings: PTFE

Rotor: Aluminum, hard-coat anodized

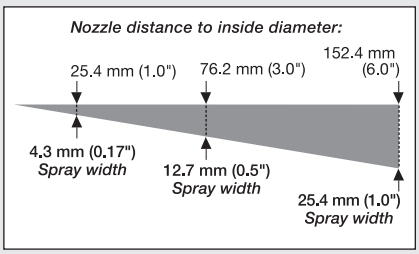
All stainless steel parts are passivated.
US Patent No. D376,376 for 782RA Radial Spray Valve

7021649 782RA Radial Spray Valve
Rotor length is 5.59 cm (2.2") and reaches into cylinders with a minimum inner diameter of 2.54 cm (1.0"). Includes fluid inlet fittings #7021499 and #7007038.

Fluid body and rotor are hard-coat anodized aluminum. Each valve can be calibrated with the stroke reference knob for process control. Radial valves include fluid inlet fittings and two 1.5 m (5 ft) control air hoses with fittings to connect the valve to the ValveMate 7160RA controller.

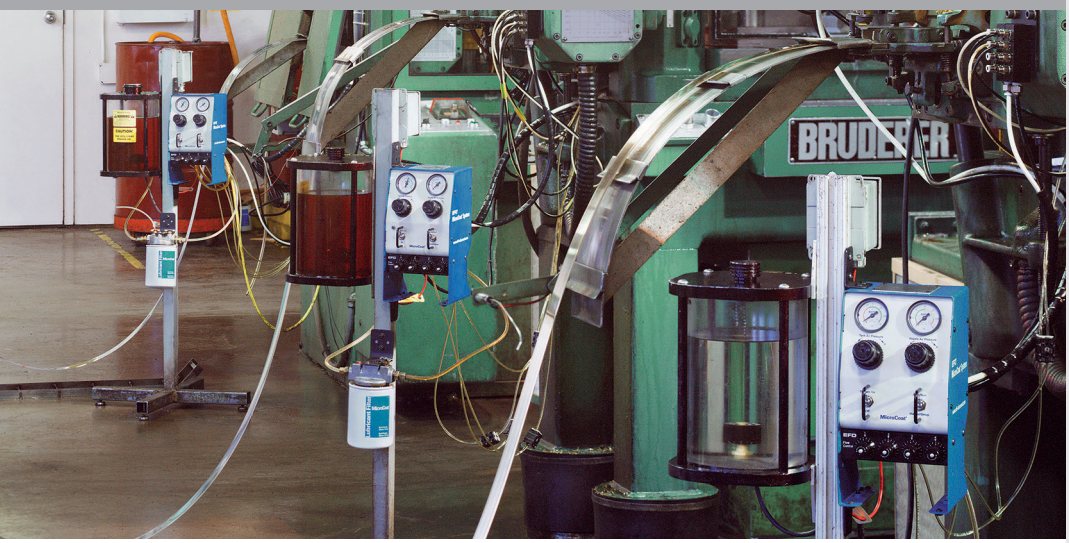
ValveMate 7160RA

The ValveMate 7160RA controls the 782RA's motor speed, valve spray time, and fluid nozzle air at the dispense station. See Valve Controllers for details.



Spray coverage shown 1/3 actual size.

Microcoat Lubrication System



The MC800 MicroCoat System is a patented, different type of stock lubrication system that lets metal stampers apply the perfect amount of oil for each job.

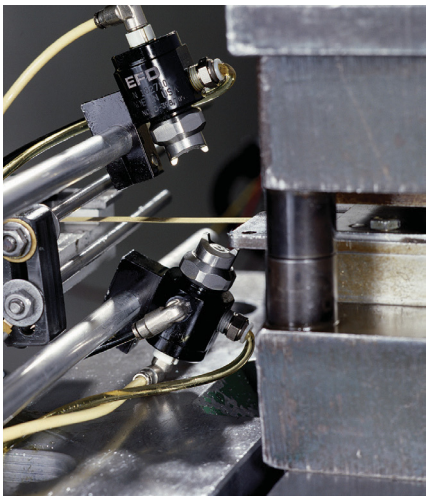
The MC800 Controller operates up to eight valves. Precision flow controls permit the amount of lubricant applied by each valve to be adjusted independently. Valves can be mounted above or below the stock. When the system is initiated, steady air pressure supplied to the reservoir forces lubricant through the filter and flow controls, and out to the valves.

As the press starts, a 3-way air solenoid activates the system. As the valves open, Low Volume Low Pressure (LVLP) air transfers a fine, consistent film of lubricant onto the stock surface.

Whether you are looking for steady or pulsed lubrication, these unique lubrication systems provide uniform coverage without overspray or mist, using much less oil.

Features and Benefits

- Even, uniform coverage, top and bottom
- Expandable, modular system
- On the fly adjustment of oil coating
- No overspray or mist
- Easy “plug and play” setup



Specifications

MC785M and MC785M-WF Valves

Size: 66.3 height mm x 49.3 mm diameter (2.61" x 1.94")

Weight: 206.4 g (7.28 oz)

Lubricant chamber: Aluminum, hard-coat anodized

Return spring: 303 stainless steel

Lubricant inlet hole: 1/8 NPT

Mounting: 6 mm tapped hole

Air cap: 303 stainless steel

Diaphragm: Viton® with PTFE coating

Needle and nozzle: 303 stainless steel

Nozzle diameter: 1.17 mm (0.046")

All stainless steel parts are passivated.

MC800 Controller

Cabinet size: 14.6W x 19.1D x 27.6H cm (5.75W x 7.50D x 10.88"H)

Weight: 4.8 kg (10.62 lb)

Air input required: 60 psi (4.14 bar) minimum

Tank air pressure regulator: 30 psi (2.07 bar) maximum

Nozzle air regulator: 30 psi (2.07 bar) maximum

Cycle rate: Up to 60 per minute

Pressure switch rating: 20VA, 240V

MC800 MicroCoat Lubrication System

For use with:

- Blank Stock Coating
- Can End Pull Tabs
- Coil Stock Slitting
- Cooling Fin Forming
- Fine Blanking
- Foil Rolling
- Rust Prevention
- Tube Forming
- Valve/Wire Coating

MicroCoat spray valves

7008020 MC785M
Standard fan spray valve up to 76.2 mm (3") coverage.

7008013 MC785M-WF
Wide fan spray valve up to 152.4 mm (6") coverage.

MicroCoat controllers

7008008 MC800
MicroCoat controller with 0-100 psi (0-7 bar) regulator.

7023877 MC800-15
MicroCoat controller with 0-15 psi (0-1 bar) regulator.

MicroCoat fluid manifolds accept up to (4) flow controls

7008010 8101
Manifold with pressure sensor.

7008003 8101NPS
Manifold without pressure sensor.

MicroCoat tank reservoirs

7023843 MC685M
3.8 liter (1 gal) acrylic see-through tank.

7023846 MC686M
7.5 liter (2 gal) acrylic see-through tank.

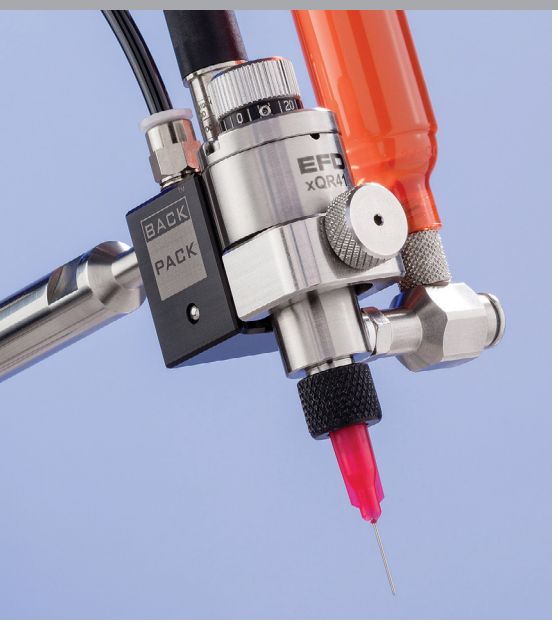
7023849 MC687M
19 liter (5 gal) stainless steel tank with low-level float switch.

7023850 MC687M-DFS
19 liter (5 gal) stainless steel tank with double float switch (detects mid and low level).

Custom Options

Please contact Nordson EFD for custom configuration.

“We stamped over 900,000 parts using only 1 gallon of oil. When we checked the tool, there was no visible wear.”
– Zierick Manufacturing Corporation



The BackPack™ Valve Actuator maintains constant pressure at the actuating air inlet, for faster response time without the risk of process variations due to a fluctuating plant air supply or different air line lengths.

- High-speed cycle capability. Cycle rates exceed 60–80Hz
- Actuation speed as low as 5–6 milliseconds
- Smaller deposit size capability due to faster valve actuation speed
- Improves process variation for better dot-to-dot consistency

BackPack Valve Actuator

For use with:

752V Series Valves

xQR41 Series Valves

741 Series Valves

7361396 BackPack
BackPack is available preinstalled on new valves, or can be ordered separately to retrofit existing valves.

The Laser Light Barrier installs easily on Liquidyn P-Jet and P-Dot jet valves to provide precise and reliable process monitoring, essential for error-free production.

- Precise detection of even the smallest deposit volumes
- Standardized output signal
- Only requires compressed air
- Robust operation regardless of environmental conditions

Laser Light Barrier

For use with:

Liquidyn Series Valves

7825237 Laser Light Barrier
Laser Light Barrier kit includes the signal amplifier, light barrier, spacer, and M2 screw. A mounting bracket is sold separately.

The patent-pending Needle Nozzle Cleaning Station is designed to automate the cleaning of needle valve dispensing tips and Liquidyn jet valve nozzles.

- Easy to operate
- "Plug and play" into your existing automated dispensing process
- Only requires compressed air
- Compatible with most fluids

Needle Nozzle Cleaning Station

For use with:

xQR41 Series Valves

741 Series Valves

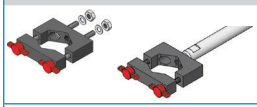
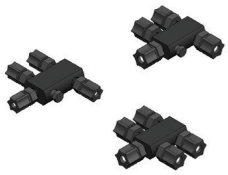
PICO *Pµlse* Contact Valves

Liquidyn Series Valves

7825249 Needle Nozzle Cleaning Station
Needle Nozzle Cleaning Station includes adapters for use with Liquidyn nozzles and Optimum stainless steel dispense tips.

www.nordsonefd.com/NNCS

VALVE ACCESSORIES

Part	Part #	Valve	Description
	7020507	All valves	Universal valve mount
	7020509		Universal valve mount with #7007003 rod
	7021057	All valves	Universal stainless steel valve stand with cast aluminum base Includes universal valve mount/rod.
	7021054	750 Series	Valve stand
	7021056	781 Series	Valve stand
	7021059	725D Series	Valve stand
	7021070	750 Series	Stainless steel mounting rods are 1.3 cm diameter x 17.8 cm long (0.5" x 7"). Designed for specific valves.
	7007003	741 / 781 Series	
	7021079	725D Series	
	7021136	736HPA-NV / 725HF Series	
	7002002	All valves	Filter/Regulator provides dry, filtered air to controllers and reservoirs. Traps moisture and particles over five microns. 100 psi (7.0 bar) regulator and gauge.
	7016548		Filter/Regulator with coalescer removes remaining liquid aerosols from air supply. Traps moisture and particles over five microns. 100 psi (7.0 bar) regulator and gauge. Recommended for systems dispensing cyanoacrylates.
	7028717	All valves except 702V, 750V / 751V horizontal mount versions and 794 Series Valves	Pneumatic DispensGun valve handle allows the operator to start and stop the dispense cycle. Provides a comfortable, secure grip and features a universal mounting clamp.
	7028718		Electric DispensGun valve handle that is designed for use with an EFD ValveMate controller. The electric configuration can produce either timed, repeatable deposits or operator-controlled deposits.
Stroke control knob Stroke reference ring 	7021282	750 Series (stainless steel)	Calibration ring on the stroke control knob provides 25 graduations per turn for exact stroke reference.
	7007034	782RA (aluminum)	
	7021621	741 / 781 Series (aluminum)	
	7021622	741 / 781 Series (stainless steel)	
Removable stroke control knob 	7021266	741 / 781 Series	Tamper-resist upgrade kit
	7021503	750 Series	
	7021500	782RA	
	7021523	Liquid manifolds can supply liquid from one reservoir to as many as (4) valves. Manifold and hose compression fittings are black polypropylene.	Liquid manifold, 3 outlets, 9.5 mm (3/8") OD tubing
	7021524		Liquid manifold, 3 outlets, 6.4 mm (1/4") OD tubing
	7021525		Liquid manifold, 4 outlets, 9.5 mm (3/8") OD tubing
	7021526		Liquid manifold, 4 outlets, 6.4 mm (1/4") OD tubing

Valve Fittings

VALVE FITTINGS

Fitting	Part #	Description	Color	Recommended Use
	7014840	1/4 hose to barrel adapter, polypropylene	White	Dispensing wand inlet from barrel, 1/8" ID hose
	7020133	1/4 pass-thru bulkhead, nylon	Black	1.0 liter tank outlet to 1/4" OD tubing
	7014708	1/4 NPT X 1/4 NPT stainless steel street elbow	Silver	19 liter top-ported tank outlet
	7020153	3/8 pass-thru bulkhead, nylon	Black	5 liter top-ported tank outlet to 3/8" OD tubing, pass-thru style
	7012255	M5 X 4 mm push-in elbow fitting	Silver	754V aseptic valve
	7014845	Barrel adapter 3/32 barb, polypropylene	White	Dispensing wand inlet from barrel 3/32" ID hose
	7021308	Barrel to 750V input nickel-plated brass	Silver	750V inlet to barrel
	7021464	Elbow fitting: 1/8 NPT X 1/8 barb, polypropylene	Clear	752V and 741V Series inlet to 1/8" ID tubing
	7021496	Elbow fitting: 1/8 NPT X 3/8 barb black, nylon	Black	Inlet fitting for 3/8" OD X 1/4" ID tubing
	7021494	Elbow fitting: 1/8 NPT X 3/8 barb, polypropylene natural	Natural	Inlet fitting for 3/8" OD X 1/4" ID tubing
	7020130	Fitting: 1/4 X 1/4 bulkhead, nylon	Black	1.0 liter tank outlet to 1/4" OD tubing
	7020136	Fitting: 1/8 NPT X 3/8 compression elbow, nylon	Black	1/8 NPT elbow to 3/8" OD tubing
	7021489	Fitting, fluid: 1/8 barb – 754V	Silver	754V inlet to 1/4" OD X 1/8" ID tubing
	7021491	Fitting, fluid: 4 mm barb – 754V	Silver	754V inlet to 6 mm OD X 4 mm ID tubing
	7021299	Fitting: 1/4-28 to 1/8 barb, stainless steel	Silver	750V inlet to 1/8" ID tubing
	7021309	Fitting: 1/4-28 to barrel black, polypropylene	Black	750V inlet to barrel
	7021310	Fitting: 1/4-28 to cartridge, polypropylene	Clear	750V to cartridge
	7021300	Fitting: 1/4-28 X 1/8 barb, black, polypropylene	Black	750V inlet to 1/8" ID tubing
	7021036	Fitting: 1/4 NPT X 3/8 compression elbow, stainless steel	Silver	725HF-SS inlet fitting
	7014733	Fitting: 1/8 NPT X 1/4 compression elbow, stainless steel	Silver	725D-SS, 725DA-SS, 741V-SS, 781S-SS inlet to 1/4" OD tubing

Valve Fittings

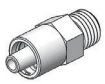
VALVE FITTINGS

Fitting	Part #	Description	Color	Recommended Use
	7020896	Fitting: 1/8 NPT X 3/8 compression elbow, brass	Brass	725D, 725DA, 741V, 752V, and 781S Series inlet to 3/8" OD tubing
	7014732	Fitting: 1/8 NPT X 3/8 compression elbow, stainless steel	Silver	725D-SS, 725DA-SS, 741V-SS, and 781S-SS Series inlet to 3/8" OD tubing
	7021462	Fitting: 1/8 NPT X 1/8 barb, nylon	Black	751V inlet to 1/8" ID tubing (for UV-cure materials)
	7021460	Fitting: 1/8 NPT X1/8 barb, polypropylene	Clear	751V inlet to 1/8" ID tubing
	7021466	Fitting: 1/8 NPT X 1/8 barb elbow, nylon	Black	752V and 741V Series inlet to 1/8" ID tubing
	7021532	Fitting: 1/8 NPT X 1/4 compression, black, polypropylene	Black	725D, 741V, 752V, and 781S Series inlet to 1/4" OD tubing
	7007038	Fitting: 1/8 NPT X 3/8 compression, black, polypropylene	Black	725D, 741V, 752V, and 781S Series inlet to 3/8" OD tubing
	7021376	Fitting: 5/16-28 to 1/8 barb, polypropylene	White	750V Series outlet to 1/8" ID tubing (dispense wand fitting)
	7020895	Fitting: Cartridge to 1/8 NPT elbow, nylon	White	725D, 725DA, 741V, 752V, and 781S Series inlet from cartridge
	7020894	Fitting: Cartridge to 1/8 NPT elbow, stainless steel	Silver	725D-SS, 725DA-SS, 741V-SS, and 781S-SS Series inlet from cartridge
	7020673	Fitting: M5 X 1/8" ID barb stainless steel, elbow	Silver	702 Series inlet to 1/8" ID x 1/4" OD tubing
	7361411	Fitting: 90° luer inlet	White	xQR41, 781Mini for direct syringe barrel feed connection
	7020905	Fitting: RTV cartridge to 1/8 NPT brass	Brass	725D, 725DA to threaded caulking cartridge
	7017014	Fitting: 1/4 NPT X 1/4 compression, black, polypropylene	Black	Cartridge and 19 liter tank outlet to 1/4" OD tubing
	7017020	Fitting: 1/4 NPT X 3/8 compression, black, polypropylene	Black	Cartridge and 19 liter tank outlet to 3/8" OD tubing
	7021038	Fitting: 1/4 NPT X 3/8 compression elbow, polypropylene	White	Standard 725HF-SS and 725HF-A inlet fitting
	7021499	Fitting: 1/8 NPT X 1/4 compression elbow, black, polypropylene	Black	725D, 741V, 752V, and 781S Series inlet to 1/4" OD tubing
	7021486	Fitting: 4.0 mm OD tubing with ferrule	White	754V inlet to 4 mm OD tubing
	7020903	Fitting: Barrel to 1/8 NPT elbow, black, polypropylene	Black	725D, 741V, 752V, 781S Series inlet to barrel
	7020150	Fitting: 3/8 X 3/8 bulkhead with O-Ring	Black	5 liter top-ported tank outlet to 3/8" OD tubing
	7020671	Fitting: M5 X 1/8" ID barb, stainless steel	Silver	702 Series inlet to 1/8" ID X 1/4" OD tubing
	7020669	Fitting: M5 X 3/32" ID barb, stainless steel	Silver	702 Series inlet to 3/32" ID X 5/32" OD tubing

VALVE FITTINGS

Fitting	Part #	Description
	7021919	Fitting: 10-32 UNF X 3/32" barb
	7021867	Inlet fitting assembly, ELB, 303SS
	7021541	Polypropylene Y-fitting for 1/4" ID tubing
	7007017	Polypropylene Y-fitting for 1/8" ID tubing
	7021537	Black nylon Y barb fitting for 3.2 mm (1/8") ID tube
	7021539	Polypropylene Y-fitting for 3/32" ID tubing
	7021545	Black plastic push-in fitting for 4.0 mm (5/32") OD tube
	7020156	Reducer 3/8" to 1/4" tubing, nylon
	7020159	Pass-through reducer 3/8" to 1/4" tubing, nylon

VALVE TIP ADAPTERS

Adapter	Part #	Valve	Material	Description
	7016948	725 Series	Polypropylene	Tip adapter 1/4 NPT, black
	7016945	725 Series	Nickel-plated brass	Tip adapter 1/4 NPT
	7007026	741MD-SS, 741V Series	Stainless steel	Tip adapter 741V, 0.046"
	7007027	741MD-SS, 741V Series	Polypropylene	SafetyLok collar for 741MD-SS, 741V Series
	7021227	741MD-SS	Stainless steel	Tip adapter with retaining nut
	7021312	750V-SS	Acetal	Tip adapter
	7021317	751V	Nylon	Tip adapter
	7014852	750V	Polypropylene	Tip adapter
	7014836	752V-SS	Polypropylene	Tip adapter, black
	7014835	752V-UHSS	Polypropylene	Tip adapter, natural

ValveMate 9000 Valve Controller

For use with:

- 702 Series Valves
- 725 Series Valves
- 736 Series Valves
- 741 Series Valves
- 752 Series Valves
- 754 Series Valves
- xQR41 Series Valves

7028693 ValveMate 9000 Controller
Increased functionality for increased results.

The ValveMate 9000 Controller supports two valve systems, one channel for each valve. Each channel is capable of driving a remote high-speed solenoid valve up to 500Hz. To further achieve greater precision and consistency, the controller incorporates a heating system and an electronic fluid reservoir pressure regulator for each channel.

The ValveMate 9000 can be programmed to automatically change the dispensing parameters over time. This allows the system to compensate for periodically changing conditions, such as viscosity changes as well as dispensing patterns of different sized deposits.

Features and Benefits

- Precise full-to-empty reservoir pressure control
- Setup parameters can be adjusted remotely by PLC
- Auto Increment mode that adjusts dispensing parameters after a certain number of shots or a specific elapsed time
- Accurate control of external system components such as low powered solenoids
- Auto Sequence mode that allows deposit patterns to be repeated automatically

Specifications

Cabinet size: 255W x 111H x 214D mm
(10.04W x 4.36H x 8.43"D)
H – includes feet; D – to end of fittings

Weight: 3.45 kg (7.60 lb)

Electrical power input:
100-240 VAC ± 10%, 2.4 Amp, 50-60Hz

Feedback circuits:
End of Cycle (EOC) 1-2 and Alarm Out (AO)
Electronic Switch, 24 VDC, 100 mA maximum

Initiate circuits:
VI 1-2: 5-24 Voltage Initiate Signal (DC)
5-24 Voltage Initiate signal duration: no less than 200 µs momentary or maintained for steady mode operation Foot Switch (optional): dry contact initiate circuit, 19 mA closure current
- foot switch initiate signal is debounced for a period of 20 ms
- debounce on foot switch signal can be disabled via serial command or by pressing the '5' key during power up

Time range: 0.0001–9.9999 sec, 100 µs resolution

Cycle rate: Up to 500Hz

Product classification: Installation Category II
Pollution Degree 2

Approvals: CE, CSA, RoHS, WEEE & China RoHS Compliant

ValveMate Controllers

ValveMate 8000 Multi-Valve Controller

For use with:

- 702 Series Valves
- 725 Series Valves
- 736HPA-NV Series Valves
- 741 Series Valves
- 752 Series Valves

Automated dispensing stations run at maximum speed and efficiency when EFD dispense valves are operated by ValveMate controllers.

The ValveMate 8000 Multi-Valve Controller provides the primary control for deposit size. The controller is designed to bring fluid dispensing control close to the dispense valve and provide numerous user-friendly features that simplify valve setup and operation.

Capable of operating up to (4) dispense valves independently or simultaneously, the ValveMate 8000 controller and control air solenoids offer state-of-the-art features and capability, maximizing automated assembly machine efficiency and convenience.

Features and Benefits

- 4 independent programmable actuation channels
- Maximum process control
- “On the fly” deposit adjustment
- Easily interfaced with a PLC
- Fast-response pneumatic solenoids

Specifications

Cabinet size: 18.3W x 5.1H x 8.6D cm
(7.22W x 2H x 3.38"D)

Weight: 0.27 kg (0.6 lb)

Input AC (to power supply):
100-240 VAC, 50/60Hz

Output voltage (from power supply):
24 VDC, 1.25 Amp maximum

Power requirements:
24 VDC, 1.25 Amp maximum

Feedback circuits:
5 to 24 VDC NC solid-state switch
100 mA maximum

Initiate circuit: 5 to 24 VDC signal

Cycle rate: Exceeds 600 per minute

Time range: Programmable 0.001 to 99.9 seconds

Approvals: CE, CSA, RoHS, WEEE & China RoHS Compliant

7022004 8000 Multi-Valve Controller
Includes controller, stand, panel mount bezel and spring clips, filter regulator, and air manifold assembly with pre-wired pressure sensor.

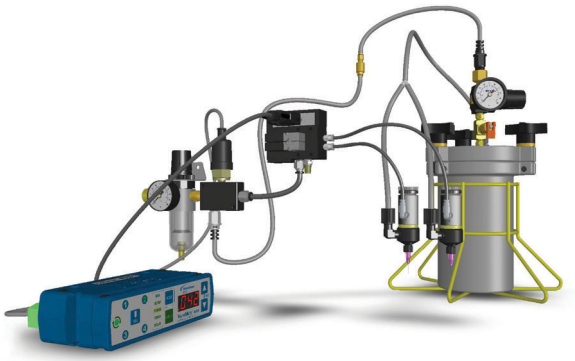
Order single or dual valve solenoid assemblies separately.
For each ValveMate 8000 ordered, select the appropriate solenoid assembly for the number of valves used. Each solenoid kit includes the pre-wired 6 pin connector and housing, 3.6 m (12 ft) cable cordset, input air hose, and push-in fittings.

7022246 Single
Single in-line solenoid for one valve operation.

7022247 Dual
Dual-solenoid block for two valve operation.

7022248 Tri
Tri-solenoid block for three valve operation.

7022249 Quad
Quad-solenoid block for four valve operation.



ValveMate 8040 Spray Valve Controller

For use with:

- 781Mini Series Valves
- 781S Series Valves
- 784S Series Valves
- 787MS Series Valves

The ValveMate 8040 Spray Valve Controller provides precise control of nozzle air flow and spray time.

Features include an adjustable external actuating air and nozzle air manifold block, (2) independent programmable actuation channels, programmable shut-off delay of nozzle air to provide a post-cycle nozzle cleaning, digital time readout and push-button time change with separate test cycle button.

Features and Benefits

- 2 independent programmable actuation channels
- Low Volume Low Pressure (LVLP) for high transfer efficiency
- Cutoff air delay (0 to 2.5 seconds)
- Nonvolatile, power-off memory
- Fast-response pneumatic solenoids

Specifications

Cabinet size: 18.3W x 5.1H x 8.6D cm (7.22W x 2H x 3.38"D)

Weight: 0.27 kg (0.6 lb)

Input AC (to power supply): 100-240 VAC, 50/60Hz

Output voltage (from power supply): 24 VDC, 1.25 Amp maximum

Power requirements: 24 VDC, 1.25 Amp maximum

Feedback circuits: 5 to 24 VDC NC solid-state switch 100 mA maximum

Initiate circuit: 5 to 24 VDC signal

Cycle rate: Exceeds 400 per minute

Time range: Programmable 0.001 to 99.9 seconds

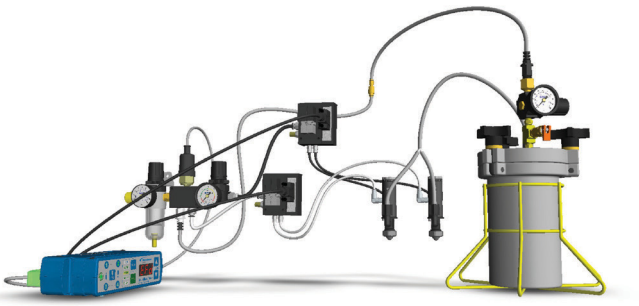
Approvals: CE, CSA, RoHS, WEEE & China RoHS Compliant

7022120 8040 Spray Valve Controller
Includes controller, stand, panel mount bezel and spring clips, filter regulator, and air manifold assembly with pre-wired pressure sensor.

Order single or dual valve solenoid assemblies separately.
For each ValveMate 8040 ordered, select the appropriate solenoid assembly for the number of spray valves used. Each solenoid kit includes the pre-wired 6 pin connector and housing, 3.6 m (12 ft) cable cordset, input air hose, and push-in fittings.

7022250 Single
Solenoid valve kit, two in-line solenoids for nozzle/actuating air.

7022251 Dual
Solenoid valve kit, two dual blocks for nozzle/actuating air.



ValveMate 7100 Single Valve Controller

For use with:

- 702 Series Valves
- 725 Series Valves
- 736HPA-NV Series Valves
- xQR41 Series Valves
- 741 Series Valves
- 752 Series Valves

The ValveMate 7100 Single Valve Controller puts push-button adjustment of valve open time in increments as small as 0.001 seconds, right at the dispensing station. The result is exceptional process control without time-consuming programming or mechanical adjustments that require the production line to be shut down.

The controller is designed for semi-automated or fully automated dispensing applications and features an internal control air solenoid.

7015340 7100 Single Valve Controller
Includes controller, stand, panel mount bezel and spring clips, filter regulator, and air manifold assembly with pre-wired pressure sensor.

Features and Benefits

- Maximum process control
- Intuitive, easy operator interface
- Cost-effective
- Simple to set up and operate
- Easily interfaced with a PLC

Specifications

Cabinet size: 14.0W x 6.8H x 14.2D cm
(5.5W x 2.7H x 5.6"D)

Weight: 1.2 kg (2.9 lb)

Input AC (to power supply):
100-240 VAC, 50/60Hz

Output voltage (from power supply):
24 VDC, 0.63 Amp maximum

Power requirements:
24 VDC, 0.63 Amp maximum

Feedback circuits:
5 to 24 VDC NC solid-state switch
100 mA maximum

Initiate circuit: 5 to 24 VDC signal

Cycle rate: Exceeds 600 per minute

Time range: Programmable 0.001 to 99.9 seconds

Approvals: CE, CSA, RoHS, WEEE & China RoHS Compliant

"We had a skilled technician spending 8 to 10 hours a week adjusting equipment. By putting a controller at each dispense valve station, we've reduced that time to almost zero."

– A.T. Cross Company

ValveMate 7140 Single Spray Valve Controller

For use with:

- 781Mini Series Valves
- 781S Series Valves
- 784S Series Valves
- 787MS Series Valves

The ValveMate 7140 Spray Valve Controller is designed for single spray valve applications and features internal solenoids. It is a fast, convenient way to adjust spray valve open time in increments as small as 0.001 seconds.

Adjustable 0–30 psi* (0–2.0 bar) nozzle air pressure regulator provides Low Volume Low Pressure (LVLP) air to the nozzle for high transfer efficiency without overspray. The result is exceptional spray pattern definition without time-consuming programming or mechanical adjustments that require the production line to be shut down.

The controller is designed for semi-automated or fully automated dispensing applications and features an internal control air solenoid.

*Also available with 0-100 psi (0-7 bar) nozzle air pressure control for spraying thicker materials.

7015341 7140 Spray Valve Controller
Features 0-30 psi (0-2 bar) nozzle air pressure control. Includes controller, stand, panel mount bezel and spring clips, filter regulator, and air manifold assembly with pre-wired pressure sensor.

7015429 7140 Spray Valve Controller
Features 0-100 psi (0-7 bar) nozzle air pressure control. Includes controller, stand, panel mount bezel and spring clips, filter regulator, and air manifold assembly with pre-wired pressure sensor.

Features and Benefits

- Timed or continuous spray
- Clean, clog-free cutoff
- Fast-response pneumatic solenoids
- Digital air output display (psi/bar)
- “On the fly” adjustment

Specifications

Cabinet size: 20.0W x 6.8H x 14.2D cm
(7.9W x 2.7H x 5.6"D)

Weight: 1.8 kg (3.14 lb)

Input AC (to power supply):
100-240 VAC, 50/60Hz

Output voltage (from power supply):
24 VDC, 0.63 Amp maximum

Power requirements:
24 VDC, 0.63 Amp maximum

Feedback circuits:
5 to 24 VDC NC solid-state switch
100 mA maximum

Initiate circuit: 5 to 24 VDC signal

Cycle rate: Exceeds 400 per minute

Time range: Programmable 0.001 to 99.9 seconds

Approvals: CE, CSA, RoHS, WEEE & China RoHS Compliant

ValveMate 7160RA Radial System Controller

For use with:

782RA Radial Spray Valve

7860C-RS Radial Spinner System

The ValveMate 7160RA Controller provides the proper controls required for consistent radial valve operation.

Unique microprocessor circuitry provides precise control of nozzle air, valve open time, and drive motor control solenoid.

Features include digital readout of spray on-time and nozzle air pressure. The 7160RA also includes a programmable shutoff delay and a test cycle button to initiate spray cycles during setup.

7029739 7160RA Radial Spray Valve Controller
Accessories included with each ValveMate 7160RA controller: Input air hose and fittings, 5-micron filter/regulator with air lubricator, universal mounting bracket, and power cord.

Features and Benefits

- Timed or continuous spray/air motor rotation
- Fast-response pneumatic solenoids
- Easily interfaced with a PLC
- Push-button time setting or one touch time programming

Specifications

Cabinet size: 20.0W x 6.8H x 14.2D cm (7.9W x 2.7H x 5.6"D)

Weight: 1.75 kg (3 lb 14 oz)

Electrical Power Input:
24 VDC (+/- 5%), 0.63 A maximum

Electrical Input Connector:
Switchcraft L722RA or equivalent, locking type

External Power Adapter: 100–240 VAC (+/-10%), ~ 50/60 Hz input, 24 VDC (+/- 5%), 0.63 A output, Switchcraft S761K locking DC plug or equivalent, wall mount, changeable AC plugs

Feedback Circuits: EOC Out & Alarm Out: Electronic switch, 24 VDC, 100 mA maximum

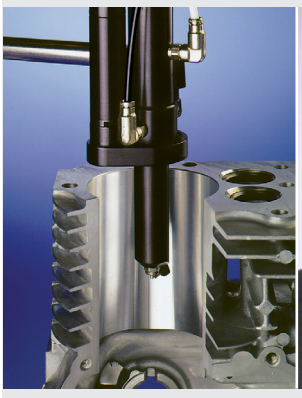
Initiate Circuits: 5–24 INIT: 5–24 VDC initiate signal
CC INIT & foot switch: Dry contact initiate circuits, 19 mA, closure current
INIT signal duration: No less than 0.012 seconds momentary or maintained for steady

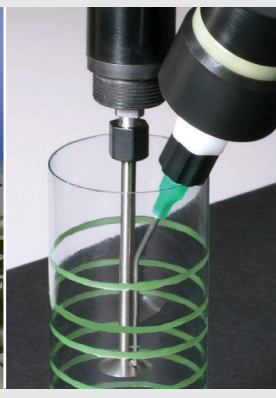
Cycle Rate: Exceeds 400 per minute

Time Range: Programmable 0.001–99.9 seconds

Product Classification: Installation Category II
Pollution Degree 2

Approvals: CE, CSA, RoHS, WEEE & China RoHS Compliant


Radial Spray System


Radial Spinner System

ValveMate 7194 Auger Valve Controller

For use with:

794 Series Auger Valves

794-TC Series Auger Valves

The ValveMate 7194 Controller provides a fast, convenient way to adjust valve open time in increments as small as 0.001 seconds. This provides exceptional process control and eliminates the need to reprogram a PLC.

A precision air pressure regulator provides precise pressure control to the barrel reservoir and can be operated in continuous or pulse mode. The controller is available in a 0–30 psi (0–2 bar) version for solder pastes, silver conductive epoxies, and other filled fluids, and a 0–100 psi (0–7 bar) version for dispensing thicker filled materials, such as thermal compounds. Each 794 / 794-TC Series Auger Valve requires a ValveMate 7194 Controller for optimal valve performance.

7360201 7194 Auger Valve Controller
0-30 psi (0-2 bar). Includes controller, input air hose and fittings, 5-micron filter/regulator with air lubricator, and power cord.

7362374 7194 Auger Valve Controller
0-100 psi (0-7 bar). Includes controller, input air hose and fittings, 5-micron filter/regulator with air lubricator, and power cord.

Features and Benefits

- “On the fly” deposit adjustments
- Reverse capability mode provides clean cutoff for highly sticky materials
- Motor voltage range of 10–24 VDC
- Continuous or pulse pressure mode to reservoir
- Nonvolatile, power-off memory

Specifications

Cabinet size: 20.0W x 6.8H x 14.2D cm (7.9W x 2.7H x 5.6D")

Weight: 1.8 kg (3.9 lb)

Cycle rate: Exceeds 400 per minute

Time range: 0.001–99.9 seconds

Electrical power input: 30 VDC, 1.33 Amp maximum

External power adapter: 100–240 VAC (+/-10%), ~50/60Hz input, 30 VDC (+/-2%), 1.33 Amp output, Switchcraft S761K locking DC plug or equivalent, desktop type, AC input: IEC 320 inlet

Feedback circuits: EOC Out and Alarm Out: Electronic switch, 24 VDC, 100 mA maximum

Initiate circuits: 5–24 VDC signal, foot pedal, or contact closure initiate

Input air pressure: 4.5–7.0 bar (65–100 psi)

Approvals: CE, TUV, RoHS, WEEE, China RoHS Compliant

Learn more about EFD custom-made solder paste, print paste, flux, thermal compounds, and solder mask. See Solder Products for details.

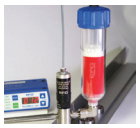
Tanks, Reservoirs, and Pumps

Nordson EFD reservoirs maintain steady fluid pressure to produce the most accurate, repeatable deposits possible. Bulk unloaders provide superior flow properties when dispensing high-viscosity adhesive and sealant materials.

Choose from a variety of options to meet your application needs. To learn more about the EFD systems used with these reservoirs and tanks, take a look at our valves and automated dispensing systems.

Nordson EFD

Tanks, Reservoirs, and Pumps Selection Guide

TANKS, RESERVOIRS, AND PUMPS								
Type	 Syringe Barrels, in Clear, Amber, Green, or Black	 Cartridge Retainer Systems with Regulators	 1/10 Gallon Retainer System with Regulator	 1L & 5L Precision Digital Gauge Tanks	 1L & 5L Analog Gauge Tanks	 19L Stainless Steel Analog Tanks	 5-Gallon Pail Analog Tanks	 Ratio Pumps with 48:1 or 65:1 ratio
Volume	3cc - 55cc (3-55 ml)	2.5 oz - 32 oz (75-960 ml)	1/10 gal (300 ml)	1 liter & 5 liter (0.26 gal & 1.32 gal)	1 liter & 5 liter (0.26 gal & 1.32 gal)	19 liter (5 gal)	19 liter (5 gal)	19 liter & 208 liter (5 gal & 55 gal)**
Recommended Fluid Viscosity	All Fluids	All Fluids	Medium-to-High Viscosities	← Low-to-Medium Viscosities (pourable / self-leveling) →				High Viscosities
Air Pressure	—	0-15 psi (0-1 bar) 0-100 psi (0-7 bar)	0-100 psi (0-7 bar)	0-10 psi (0-0.7 bar) 0-100 psi (0-7 bar)	0-15 psi (0-1 bar) 0-100 psi (0-7 bar)	0-15 psi (0-1 bar) 0-100 psi (0-7 bar)	0-100 psi (0-7 bar)	up to 2500 psi (172 bar)
Float Switch	—	—	—	Optional*	Optional*	Optional	No	Yes***
Features & Benefits	· Limits fluid waste · Reduces maintenance and cleanup · Assembly fluids often come packaged in EFD syringe barrels · Use for fluids with short shelf life	· Ideal for low-to-medium pressure dispensing from cartridges · Clear retainer allows visual monitoring of fluid level · Accepts cartridges	· Designed for use with pre-filled caulking tubes	· Digital gauge delivers exceptional full-to-empty fluid pressure control, regardless of input pressure fluctuations · Accepts pre-filled 1-pound and 1-liter bottles or pourable fluids	· Maintains steady fluid pressure · Accepts pre-filled 1-pound and 1-liter bottles or pourable fluids	· Maintains steady fluid pressure · Ideal for materials that don't require cleaning, such as oil, solvents, and water · Accepts only pourable fluids	· Maintains steady fluid pressure · No pouring necessary · Eliminates risk of introducing air bubbles · Accepts pre-filled 5-gallon pails	· Superior flow and easy operation for dispensing high-viscosity adhesives and sealants · Accepts pre-filled 5- and 55-gallon drums
Production Capacity	Low Volume	Low-to-Medium Volume	Low-to-Medium Volume	Medium-to-High Volume	Medium-to-High Volume	High Volume	High Volume	High Volume

* 5 liter (0.26 gal) tanks are available with capacitive (non-contact) fluid level sensor
** Please note that the ratio pumps do not come with 5-55 gallon tanks. Those are purchased separately.
*** Low/empty drum indication with light towers.

Precision Regulator/ Digital Gauge Fluid Reservoirs

1.0 Liter Fluid Tank

5.0 Liter Fluid Tank

Precision fluid tank pressure control is essential to ensure consistent, accurate deposits from the dispense valve. EFD's precision regulator/ digital gauge tanks offer exceptional full-to-empty fluid pressure control, regardless of input pressure fluctuations.

Available in 0-10 psi (0-0.7 bar) for low viscosity fluids and 0-100 psi (0-7.0 bar) for medium- to high-viscosity fluids.

Features and Benefits

- Precision fluid pressure regulation/ digital readout for exact fluid pressure control
- Repeatability — from one shift to the next, precision regulator/digital gauge can be reset to exact pressure setting
- Tighter setting tolerances — pressures can be set to tenths of psi
- Fast response, robust pressure regulator

Specifications

Model: 1.0 Liter

Tank body: Cast aluminum
Capacity: 1.0 liter
Maximum operating pressure: 100 psi (7.0 bar)
Maximum operating temperature: 50° C (122° F)
Weight: 3.0 kg (6.60 lb)
Height: 350 mm (13.75")
Diameter (cover maximum): 172 mm (6.75")

Model: 5.0 Liter

Tank body: Cast aluminum
Capacity: 5.0 liter
Maximum operating pressure: 100 psi (7.0 bar)
Maximum operating temperature: 50° C (122° F)
Weight: 9.1 kg (20.1 lb)
Height: 413 mm (16.25")
Diameter (cover maximum): 251 mm (9.85")

7013460 Tank
1.0 liter Tank with 0-10 psi (0-0.7 bar) regulator.

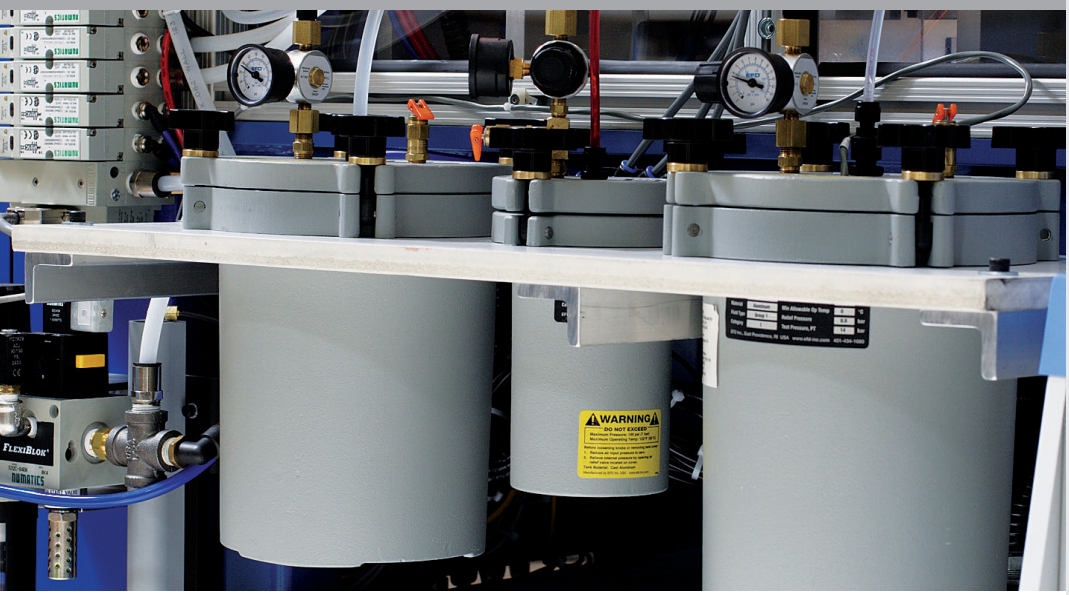
7013489 Tank
1.0 liter Tank with 0-100 psi (0-7.0 bar) regulator.

7013430 Tank
5.0 liter Tank with 0-10 psi (0-0.7 bar) regulator.

7013490 Tank
5.0 liter Tank with 0-100 psi (0-7.0 bar) regulator.

All necessary fittings and feed tubing are included with each Fluid Tank.

"I wanted to let you know how much your company has helped me. You have excellent products and a great support group."
– Puritan Bennet



Analog Gauge Fluid Reservoirs

EFD fluid tanks maintain steady fluid pressure, prevent fluid contamination and evaporation, and contain fumes. Tanks are available with 0-15 psi (0-1.0 bar) or 0-100 psi (0-7.0 bar) constant-bleed air regulators to handle different fluid viscosities.

The air regulator is selected based on fluid viscosity. Watery fluids require the 0-15 psi (0-1.0 bar) regulator, while thicker fluids need the 0-100 psi (0-7.0 bar) regulator. Since tanks are charged by plant air, we recommend the 5-micron filter/regulator (#7002002) to filter contaminants.

Each fluid tank is shipped complete with constant-bleed precision air regulator and gauge, air hose with shutoff valve, liner, and fluid feed tubing.

615 Series
1.0 Liter Tanks
Accommodates one pound/one liter bottles. Recommended for pourable fluids only.

626 Series
5.0 Liter Tanks
Fluid can be poured into the liner or the fluid container may be put into the reservoir for direct dispensing.

Specifications

Model: 615DTH
Tank body: Cast aluminum
Inside diameter: 9.7 cm (3.82")
Inside depth: 17.4 cm (6.87")
Replaceable liner: Polyethylene
Liner capacity: 0.95 liter
Overall width: 17.3 cm (6.81")
Overall height: 35.6 cm (14.01")
Regulator & gauge: 100 psi (7.0 bar)
Maximum operating pressure: 100 psi (7.0 bar)

Model: 615DTL
Regulator & gauge: 15 psi (1.0 bar)

Model: 626DTH
Tank body: Cast aluminum
Inside diameter: 17.3 cm (6.81")
Inside depth: 24.8 cm (9.75")
Replaceable liner: Polyethylene
Liner capacity: 3.8 liter
Overall width: 28.3 cm (11.14")
Overall height: 40.6 cm (15.98")
Regulator & gauge: 100 psi (7.0 bar)
Maximum operating pressure: 100 psi (7.0 bar)

Model: 626DTL
Regulator & gauge: 15 psi (1.0 bar)

7010004 615DTH Tank
1.0 liter tank with 100 psi (7.0 bar) regulator.

7020121 615DTL Tank
1.0 liter tank with 15 psi (1.0 bar) regulator.

7020120 615DTH-FS Tank
1.0 liter tank with 100 psi (7.0 bar) regulator and stainless steel low level float switch (suitable for use with most lubricants, fluxes, and solvents).

7020122 615DTL-FS Tank
1.0 liter tank with 15 psi (1.0 bar) regulator and stainless steel low level float switch (suitable for use with most lubricants, fluxes, and solvents).

7020186 626DTH Tank
5.0 liter tank with 100 psi (7.0 bar) regulator.

7020189 626DTL Tank
5.0 liter tank with 15 psi (1.0 bar) regulator.

7020187 626DTH-B Tank
5.0 liter tank with 100 psi (7.0 bar) regulator and black feed tubing for light-sensitive and UV-cure materials.

7020188 626DTH-FS Tank
5.0 liter tank with 100 psi (7.0 bar) regulator and stainless steel low level float switch (suitable for use with most lubricants, fluxes, and solvents).

7020190 626DTL-FS Tank
5.0 liter tank with 15 psi (1.0 bar) regulator and stainless steel low level float switch (suitable for use with most lubricants, fluxes, and solvents).

Nordson EFD's 19L (5-gal) tanks are available for higher volume dispensing of low- to medium-viscosity fluids which are pourable or self-leveling. Two types are available.

Standard EFD stainless steel 19 Liter tanks are ideal for materials that do not require cleaning, such as oils, solvents, and water-based fluids. Tanks are unlined with a small opening to easily pour in your fluid. These tanks come with an analog gauge 100 psi or 15 psi regulator; an optional digital gauge is also available.

The second option is EFD's stainless steel 19L (5-gallon pail) tank. Designed to allow the easy drop-in of pre-filled 5-gallon pails, this tank is shipped with an analog gauge, 100 psi regulator.

Each fluid tank is shipped complete with a constant-bleed precision air regulator and gauge, air hose with shutoff valve, and fluid feed tubing.

19L Fluid Reservoirs

Standard 19L Tanks

7020039 19.0 Liter Tank
19.0 liter stainless steel tank with 100 psi (7.0 bar) regulator.

7020040 19.0 Liter Tank
19.0 liter stainless steel tank with 15 psi (1.0 bar) regulator.

7006001 19.0 Liter Tank with Float Switch
19.0 liter stainless steel tank with 100 psi (7.0 bar) regulator and stainless steel low-level float switch (suitable for use with most lubricants, fluxes, and solvents).

7020041 19.0 Liter Tank with Float Switch
19.0 liter stainless steel tank with 15 psi (1.0 bar) regulator and stainless steel low-level float switch (suitable for use with most lubricants, fluxes, and solvents).

5-Gallon Pail Tank

7362453 19.0 Liter (5-gallon pail) Tank
19.0 liter stainless steel tank with 100 psi (7.0 bar) analog regulator, accepts pre-filled standard 5-gallon pails.

MicroCoat Tanks

See MicroCoat Lubrication System for details.

The Nordson EFD Fluid Pressure Booster is designed to help move thick materials from a tank or cartridge to an EFD precision valve by boosting dispense pressure up to 100 bar.

The Fluid Pressure Booster increases the pressure applied to dispensed materials, facilitating the supply of high-viscosity greases, adhesives, and silicones. Its modular design allows quick and easy cleaning of all fluid-carrying components, making it particularly suitable for the supply of adhesives and reactive materials.

Designed for micro-dispensing of thick materials, Fluid Pressure Boosters work with EFD's PICO *Pulse* valve systems, Liquidyn valves, and xQR41 needle valves.

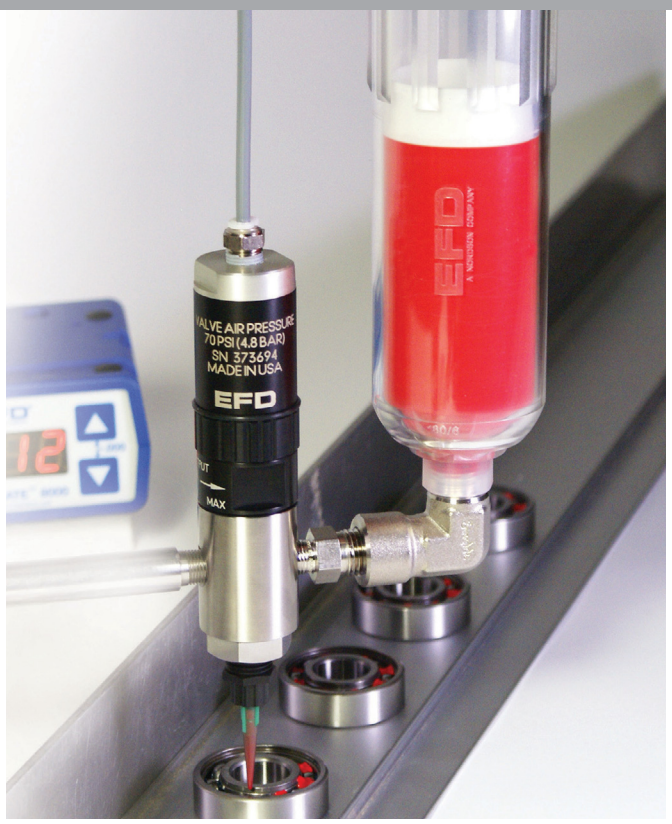
Features and Benefits

- Modular design
- Transmission ratio of 1:13 allows you to achieve a material pressure of up to 1450 psi (100 bar)
- Only a 24V power supply is required for the operation of this standalone device

Fluid Pressure Booster

7825243 Fluid Pressure Booster
Designed for micro-dispensing of thick materials.

Cartridge Retainer Systems with Regulators



Two styles of Cartridge Retainer Systems with Regulators are available — one uses disposable polyethylene liners in sizes of 2.5 fl oz (75 ml), 6.0 fl oz (180 ml), 12 fl oz (360 ml), 20 fl oz (600 ml), and 32 fl oz (960 ml). The second is a 1/10 gallon (300 ml) system for use with pre-filled caulking tubes.

Both systems include cap, cartridge, all necessary fittings, air tubing, regulator with gauge, and 1.5 m (5 ft) of 6 mm (0.24") OD polyethylene feed tubing.

Regulators supplied with cartridge reservoirs are precision, constant-bleed type to ensure consistent liquid pressurizing at all pressure settings.

Each reservoir includes a special tee fitting to connect both the reservoir and the controller to the EFD 5-micron filter/regulator (supplied with each ValveMate controller).

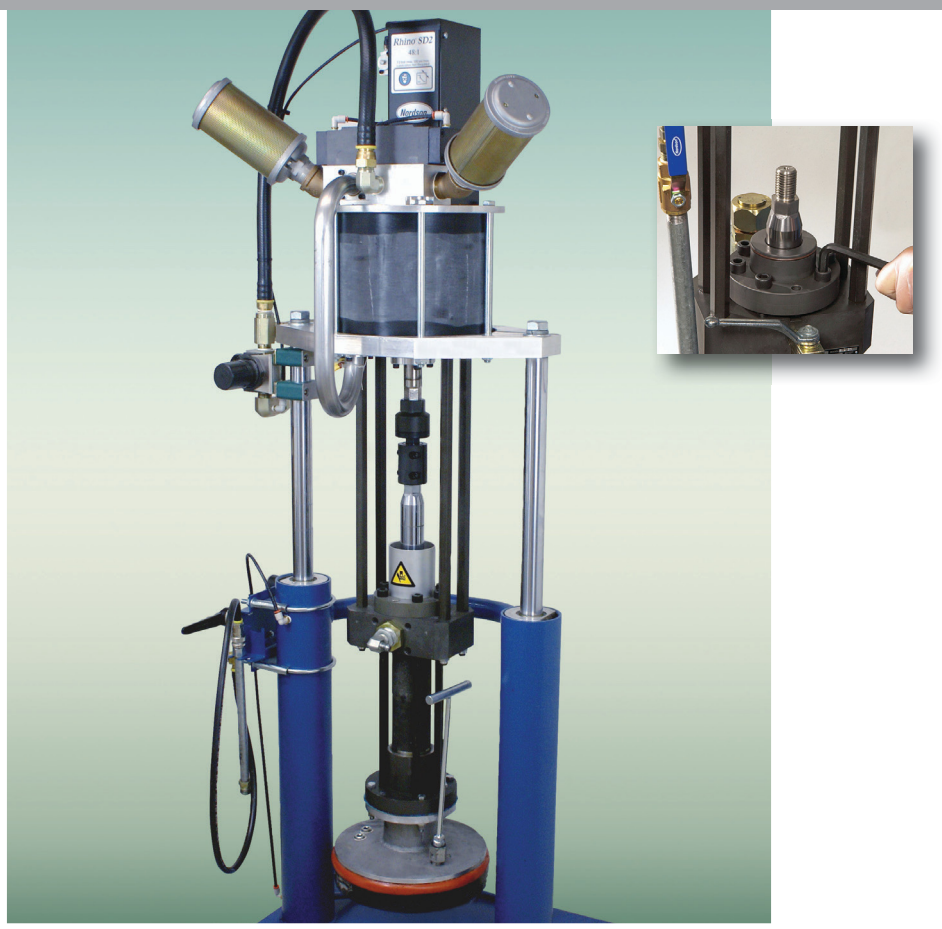
CARTRIDGE RETAINER SYSTEMS WITH REGULATORS

Part #	Size	Description
7012431	2.5 fl oz (75 ml)	Cartridge assembly with 15 psi (1.0 bar) regulator
7012432	2.5 fl oz (75 ml)	Cartridge assembly with 100 psi (7.0 bar) regulator
7012434	6 fl oz (180 ml)	Cartridge assembly with 15 psi (1.0 bar) regulator
7012435	6 fl oz (180 ml)	Cartridge assembly with 100 psi (7.0 bar) regulator
7012437	12 fl oz (360 ml)	Cartridge assembly with 15 psi (1.0 bar) regulator
7012438	12 fl oz (360 ml)	Cartridge assembly with 100 psi (7.0 bar) regulator
7013889	20 fl oz (600 ml)	Cartridge assembly with 15 psi (1.0 bar) regulator
7012440	20 fl oz (600 ml)	Cartridge assembly with 100 psi (7.0 bar) regulator
7014100	32 fl oz (960 ml)	Cartridge assembly with 100 psi (7.0 bar) regulator

1/10 GALLON CARTRIDGE ASSEMBLY WITH REGULATOR

Part #	Size	Description
7018646	1/10 gal (300 ml)	Cartridge assembly for caulking tubes with 100 psi (7.0 bar) regulator

Rhino Bulk Unloader Ratio Pump



EFD's Rhino® Bulk Unloaders are designed to dispense high-viscosity, ambient-temperature adhesives and sealants for a variety of manufacturing applications. These durable bulk unloaders provide superior flow properties and ease of operation when dispensing high-viscosity adhesive and sealant materials.

Package includes one Rhino pump assembly with output fittings sized for a 3/8" high pressure hose. Fittings are JIC, 37 degrees with 9/16-18 threads; one mastic regulator assembly with input and output fittings, fluid pressure gauge, air regulator, and gauge for air diaphragm.

Features and Benefits

- Works with EFD high-pressure valves
- Large internal passages for greater efficiency
- Fast air motor changeovers for uniform output
- Oil-less air motor
- Wear-resistant XDII "Scoreguard" hydraulic pump sections

RHINO SELECTION GUIDE

Ratio	Air Motor Size	Volumetric Displacement	Maximum Output
48:1	10"	8 in^3/stroke	4.2 liter/min.* (1.1 gal/min.)
65:1	10"	5.8 in^3/stroke	2.8 liter/min.* (0.75 gal/min.)

* Output dependent on material viscosity, temperature, filters, and system configuration.

Add 152.4 mm (6") to height dimension for units with optional casters.

Rhino package includes pump, mastic regulator, and all manuals

1600542
Rhino package; Small frame; 5 gal pail; 48:1 ratio.

1600534
Rhino package; Small frame; 5 gal pail; 65:1 ratio.

1600539
Rhino package; Large frame; 55 gal drum; 48:1 ratio.

1600536
Rhino package; Large frame; 55 gal drum; 65:1 ratio.

Rhino pump assembly with output fittings

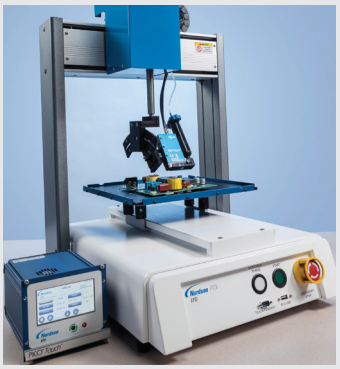
1600541
Rhino with output fittings; Small frame; 5 gal pail; 48:1 ratio.

1600533
Rhino with output fittings; Small frame; 5 gal pail; 65:1 ratio.

1600538
Rhino with output fittings; Large frame; 55 gal drum; 48:1 ratio.

1600535
Rhino with output fittings; Large frame; 55 gal drum; 65:1 ratio.

Automated Dispensing Systems



Nordson EFD's range of automated dispensing systems are specifically designed and configured for precise fluid dispensing using EFD syringe barrel and valve systems.

Specialized DispenseMotion™ software and fully 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, compound arcs, and complex patterns on different planes.

Closed-loop encoding, along with the smart vision CCD camera and laser height sensing, allows the systems to automatically adjust a dispensing program to compensate for both surface height changes and variations in product orientation.

The systems set up quickly and are easy to run, providing more time for other projects while increasing product yield.

Features and Benefits

- Produces more parts and reduces process time
- Improves product quality from more precise, accurate dispensing
- Quicker learning curve for operators — programming is easier, more visual
- Faster startup to introduce automation, with less production downtime
- Fully integrated positioning and dispensing functions

Nordson EFD

PROPlus / PRO Series Automated Dispensing System

The PROPlus / PRO Series is EFD's most advanced automated dispensing system. Along with specialized DispenseMotion software and fully integrated vision and laser height sensing capabilities, the system includes closed-loop encoding to deliver best-in-class dispensing performance and exceptional process control.

Features and Benefits

- Dual linear guide, advanced servomotor, and ball screw actuation (PROPlus only)
- Best-in-class repeatability and speed (PROPlus +/- 0.003 mm; PRO +/- 0.004 mm)
- 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
- Improved product quality; more precise, accurate dispensing
- Quicker learning curve for operators; programming is easier, more visual
- Produces more parts and reduces process time

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

Items/Models	SPECIFICATIONS			
	PRO3 / PRO3L	PRO4 / PRO4L	PROPlus3 / PROPlus3L	PROPlus4 / PROPlus4L
Part #	7362911	7360860	7363536	7363539
Part # with Laser	7362913(A) / 7362914(B)	7360861(A) / 7360862(B)	7363538(A) / 7363537(B)	7363541(A) / 7363540(B)
Part # Europe*	7363829	7361353	7363650	7363653
Part # Europe* with Laser	7363830(A) / 7363831(B)	7361354(A) / 7361355(B)	7363652(A) / 7363651(B)	7363654(A) / 7363655(B)
Number of Axes	3			
Maximum Working Area (X / Y / Z)	250 / 250 / 100 mm (10 / 10 / 4") / 250 / 220 / 100 mm (10 / 9 / 4")	350 / 350 / 100 mm (14 / 14 / 4") / 350 / 320 / 100 mm (14 / 13 / 4")	250 / 250 / 100 mm (10 / 10 / 4") / 250 / 220 / 100 mm (10 / 9 / 4")	350 / 350 / 100 mm (14 / 14 / 4") / 350 / 320 / 100 mm (14 / 13 / 4")
Workpiece Payload	10.0 kg (22.0 lb)	10.0 kg (22.0 lb)	25.0 kg (55.1 lb)	25.0 kg (55.1 lb)
Tool Payload	3.5 kg (7.7 lb) / 1.5 kg (3.3 lb)	3.5 kg (7.7 lb) / 1.5 kg (3.3 lb)	6.0 kg (13.2 lb)	6.0 kg (13.2 lb)
Weight	45.0 kg (99.2 lb) / 46.5 kg (102.5 lb)	57.5 kg (126.8 lb) / 59 kg (130.1 lb)	50.5 kg (111.3 lb) / 52 kg (114.6 lb)	63.5 kg (140.0 lb) / 65 kg (143.3 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")
Dimensions with Laser	793W x 690H x 590D mm (31W x 27H x 22D")	833W x 690H x 690D mm (33W x 27H x 27D")	793W x 690H x 590D mm (31W x 27H x 22D")	833W x 690H x 690D mm (33W x 27H x 27D")
Maximum Speed (X / Y / Z)	500 / 250 mm/s (20 / 10"/s)	500 / 250 mm/s (20 / 10"/s)	800 / 250 mm/s (31 / 10"/s)	800 / 250 mm/s (31 / 10"/s)
Drive System	5-phase micro stepping motor	5-phase micro stepping motor	Servomotor	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	±0.004 mm/axis	±0.003 mm/axis	±0.003 mm/axis
Tip Detection System	Included			
Vision	CCD smart camera			
DispenseMotion Software	Included			
Laser Height Detection	Optional / Included			
Approvals / Warranty	CE, RoHS, WEEE, China RoHS / 1 year, limited			

*Complies with European safety regulations.

www.nordsonefd.com/PROVideo

EV Series Automated Dispensing Systems

The EV Series offers simple vision for precise fluid application in an automated solution. Along with specialized DispenseMotion software and a pencil camera, the system is quick to set up and easy to program. Platforms range from 150 x 200 mm to 570 x 500 mm, making them an ideal solution for batching or critical dispensing applications.

Features and Benefits

- Simple camera and dispensing software make setup and programming easy
- On screen preview of the dispensing path facilitates programming
- Streamlined file import and conversion
- True three-dimensional motion control
- Wide range of work envelopes
- Faster cycle and batch times
- Easy integration into any manufacturing operation

EV Series pencil camera vision makes programming patterns easier.

Item/Model	SPECIFICATIONS				
	E2V	E3V	E4V	E5V	E6V
Part #	7360856	7360857	7360858	7360859	7362103
Part # Europe*	7361349	7361350	7361351	7361352	7362104
Number of Axes	3				
Maximum Working Area (X / Y / Z)	150 / 200 / 50 mm (6 / 8 / 2")	250 / 300 / 100 mm (10 / 12 / 4")	350 / 400 / 100 mm (14 / 16 / 4")	450 / 500 / 150 mm (18 / 20 / 6")	570 / 500 / 150 mm (22 / 20 / 6")
Workpiece Payload	5.0 kg (11.0 lb)	10.0 kg (22.0 lb)	10.0 kg (22.0 lb)	10.0 kg (22.0 lb)	10.0 kg (22.0 lb)
Tool Payload	1.5 kg (3.3 lb)	3.0 kg (6.6 lb)	3.0 kg (6.6 lb)	3.0 kg (6.6 lb)	3.0 kg (6.6 lb)
Weight	29.0 kg (63.9 lb)	47.5 kg (104.7 lb)	52.5 kg (115.7 lb)	55.0 kg (121.3 lb)	58.0 kg (127.9 lb)
Dimensions	481w x 510H x 432D mm (19w x 20H x 17D")	596w x 644H x 543D mm (23w x 25H x 21D")	696w x 644H x 638D mm (27w x 25H x 25D")	796w x 814H x 718D mm (31w x 32H x 28D")	913w x 812H x 718D mm (36w x 32H x 28D")
Maximum Speed	500 / 250 mm/s (20 / 10"/s)	800 / 320 mm/s (31 / 13"/s)	800 / 320 mm/s (31 / 13"/s)	800 / 320 mm/s (31 / 13"/s)	800 / 320 mm/s (31 / 13"/s)
Drive System	3-phase micro stepping motor				
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, 230 W	100–240 VAC, ±10%, 50/60Hz, 20 Amp maximum, 350 W	100–240 VAC, ±10%, 50/60Hz, 20 Amp maximum, 350 W	100–240 VAC, ±10%, 50/60Hz, 20 Amp maximum, 350 W	100–240 VAC, ±10%, 50/60Hz, 20 Amp maximum, 350 W
Repeatability**	±0.008 mm/axis				
Vision	Pencil camera				
DispenseMotion Software	Included				
Tip Detection System	Optional				
Height Sensor	Optional				
Approvals / Warranty	CE, RoHS, WEEE, China RoHS / 1 year, limited				

*Complies with European safety regulations.

E Series Automated Dispensing Systems

The E Series offers precise fluid application in an automated solution. Along with specialized TeachMotion™ software, the E Series relies on an easy-to-use Teach Pendant for programming. Platforms range from 200 x 200 mm to 620 x 500 mm, making them ideal for batching or critical dispensing.

Features and Benefits

- Simplified setup and programming via Teach Pendant or file importation
- True, three-dimensional motion control
- Rugged, reliable construction and small footprint
- Wide range of work envelopes
- Faster cycle and batch times
- Easy integration into any manufacturing operation

E Series makes automation easy with precise performance and fast programming.

	SPECIFICATIONS				
Item/Model	E2	E3	E4	E5	E6
Part #	7360852	7360853	7360854	7360855	7362101
Part # Europe*	7361345	7361346	7361347	7361348	7362102
Number of Axes	3				
Maximum Working Area (X / Y / Z)	200 / 200 / 50 mm (8 / 8 / 2")	300 / 300 / 100 mm (12 / 12 / 4")	400 / 400 / 100 mm (16 / 16 / 4")	500 / 500 / 150 mm (20 / 20 / 6")	620 / 500 / 150 mm (24 / 20 / 6")
Workpiece Payload	5.0 kg (11.0 lb)	10.0 kg (22.0 lb)	10.0 kg (22.0 lb)	10.0 kg (22.0 lb)	10.0 kg (22.0 lb)
Tool Payload	3.0 kg (6.6 lb)	5.0 kg (11.0 lb)	5.0 kg (11.0 lb)	5.0 kg (11.0 lb)	5.0 kg (11.0 lb)
Weight	21.0 kg (46.3 lb)	39.5 kg (87.1 lb)	44.5 kg (98.1 lb)	47.0 kg (103.6 lb)	50.0 kg (110.2 lb)
Dimensions	370W x 510H x 414D mm (15W x 20H x 16D")	490W x 644H x 519D mm (19W x 25H x 20D")	590W x 644H x 617D mm (23W x 25H x 24D")	690W x 814H x 718D mm (27W x 32H x 28D")	808W x 812H x 718D mm (32W x 32H x 28D")
Maximum Speed	500 / 250 mm/s (20 / 10"/s)	800 / 320 mm/s (31 / 13"/s)	800 / 320 mm/s (31 / 13"/s)	500 / 320 mm/s (20 / 13"/s)	500 / 320 mm/s (20 / 13"/s)
Drive System	3-phase micro stepping motor				
Memory Capacity	1–99 programs 1–9,999 points per program				
General Purpose I/O	8 inputs / 8 outputs				
Input AC (to power supply)	100–240 VAC, ±10%, 50/60Hz, 20 Amp maximum, 200 W	100–240 VAC, ±10%, 50/60Hz, 20 Amp maximum, 320 W	100–240 VAC, ±10%, 50/60Hz, 20 Amp maximum, 320 W	100–240 VAC, ±10%, 50/60Hz, 20 Amp maximum, 320 W	100–240 VAC, ±10%, 50/60Hz, 20 Amp maximum, 320 W
Repeatability	±0.008 mm/axis				
Teach Pendant	Included				
Tip Alignment Kit	Optional				
Height Sensor	Optional				
Approvals / Warranty	CE, RoHS, WEEE, China RoHS / 1 year, limited				

*Complies with European safety regulations.

RV Series Automated Dispensing Systems

The 4-axis RV Series offers easy setup and programming with specialized vision-guided DispenseMotion software and an integrated CCD smart vision camera to deliver market-leading repeatability and accuracy in fluid placement. Simultaneous X and Y movement during R rotation provides true point of programming for dispensing at any angle along the 360° rotation plane.

Features and Benefits

- Simplified setup and programming with EFD's advanced vision-guided DispenseMotion Software
- On-screen preview of the dispensing path facilitates programming
- Market-leading dimensional positioning accuracy and deposit placement repeatability with powerful CCD camera
- Faster cycle and batch times with best-in-class +/- 8 µm repeatability
- 360° rotation for ID and OD dispensing

RV Series CCD smart vision camera verifies workpiece presence and orientation.

Item/Model	SPECIFICATIONS		
	R3V	R4V	R6V
Part #	7363556	7363557	7363558
Part # Europe*	7363572	7363573	7363574
Number of Axes	4		
Maximum Working Area (X / Y / Z / R°)	300 / 300 / 150 mm / ±999° (11.8 / 11.8 / 5.9" / ±999°)	400 / 400 / 150 mm / ±999° (15.7 / 15.7 / 5.9" / ±999°)	620 x 500 x 150 mm / ±999° (24 / 19.7 / 5.9" / ±999°)
Workpiece Payload	10.0 kg (22.0 lb)		
Tool Payload	3.0 kg (6.6 lb)		
Weight	50.0 kg (110 lb)	55.0 kg (121 lb)	61.0 kg (135 lb)
Dimensions	645W x 914H x 552D mm (25W x 36H x 22D")	745W x 914H x 652D mm (29W x 36H x 26D")	965W x 914H x 752D mm (38W x 36H x 30D")
Maximum Speed (XY / Z)	800 / 320 mm/s (31 / 13"/s)		
Maximum Speed (R)	720 deg/s		
Drive System	3-phase micro stepping motor		
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, 320W		
Repeatability (XY / Z)	±0.008 mm / axis		
Repeatability (R°)	±0.005		
High Precision Vision	Included		
DispenseMotion Software	Included		
Approvals / Warranty	CE, RoHS, WEEE, China RoHS / 1 year, limited		

*Complies with European safety regulations.

R Series Automated Dispensing Systems

The 4-axis R Series offers easy setup and programming with specialized TeachMotion Teach Pendant software designed to deliver market-leading repeatability and accuracy in fluid placement. Simultaneous X and Y movement during R rotation provides true point programming for dispensing at any angle along the 360° rotation plane.

Features and Benefits

- Built-in tip recalibration for easy tip change alignment
- Easy USB file upload and download
- 360° rotation for ID and OD dispensing
- Quicker setup and programming
- Faster cycle and batch times with best-in-class +/- 8 µm repeatability
- New manufacturing opportunities

R Series makes 4-axis dispensing automation easy.

	SPECIFICATIONS		
Item/Model	R3	R4	R6
Part #	7361912	7361914	7361916
Part # Europe*	7361913	7361915	7361917
Number of Axes	4		
Maximum Working Area (X / Y / Z / R°)	300 / 300 / 150 mm / ±999° (12 / 12 / 6" / ±999°)	400 / 400 / 150 mm / ±999° (16 / 16 / 6" / ±999°)	620 x 500 x 150 mm / ±999° (24 / 20 / 6" / ±999°)
Workpiece Payload	10.0 kg (22.0 lb)		
Tool Payload	3.0 kg (6.6 lb)		
Weight	41.0 kg (90.4 lb)	46.0 kg (101.4 lb)	52.0 kg (114.7 lb)
Dimensions	490W x 901H x 519D mm (19W x 35H x 20D")	590W x 901H x 619D mm (23W x 35H x 24D")	810W x 901H x 616D mm (32W x 35H x 24D")
Maximum Speed (XY / Z)	800 / 320 mm/s (31 / 13"/s)		
Maximum Speed (R°)	720 deg/s		
Drive System	3-phase micro stepping motor		
Memory Capacity	1–99 programs 1–9,999 points per program		
General Purpose I/O	8 inputs / 8 outputs		
Input AC (to power supply)	100–240 VAC, ±10%, 50/60Hz, 20 Amp maximum, 320 W		
Repeatability (XY / Z)	±0.008 mm / axis		
Repeatability (R°)	±0.005		
Teach Pendant	Included		
Tip Alignment Kit	Optional		
Approvals / Warranty	CE, RoHS, WEEE, China RoHS / 1 year, limited		

*Complies with European safety regulations.

GV Series Automated Dispensing System

Nordson EFD's vision-guided GV Series automated dispensing gantry systems deliver easy automation for precise fluid applications. Working envelopes range from 400 mm to 800 mm, making them an ideal solution for precise fluid dispensing onto substrates requiring large work envelopes while not sacrificing repeatability. The GV Series can work as a standalone system or as a key part of an automated solution and is easily integrated into rotary tables and conveyor-fed assembly lines.

Features and Benefits

- Work envelopes as large as 800 mm
- Simplified setup and programming with EFD's advanced vision-guided DispenseMotion software
- Unlimited workpiece payload provides full range of dispensing application opportunities
- Ideal for conveyer-fed automation
- Seamless integration into any manufacturing operation

The GV Series automated dispensing system has an unlimited workpiece payload.

	SPECIFICATIONS	
Items/Models	G4V	G8V
Part # (100 mm post)	7363644	7363647
Part # (150 mm post)	7363645	7363648
Part # (250 mm post)	7363646	n/a
Number of Axes	3	
Maximum Working Area (X / Y / Z)	400 / 400 / 100 mm (16 / 16 / 4")	800 / 800 / 100 mm (31 / 31 / 4")
Tool Payload	3.0 kg (6.6 lb)	8.0 kg (17.6 lb)
Weight	63.5 kg (140.0 lb)	181.5 kg (400.1 lb)
Dimensions	833W x 382H x 730D mm (33W x 15H x 29D")	1,489W x 534H x 1,160D mm (59W x 21H x 46D")
Maximum Speed (XY / Z)	500 / 320 mm/s (20 / 13"/s)	800 / 320 mm/s (31 / 13"/s)
Drive System	5-phase micro-stepping motor	XY axis: Servo motor Z axis: 5-phase micro-stepping motor
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, 420 W	220 VAC, ±10%, 50/60 Hz, 10 Amp maximum, 420 W
Repeatability*	±0.02 mm/axis	±0.1 mm/axis
Vision	Pencil camera	CCD smart camera
DispenseMotion Software	Included	
Tip Detection System	Optional	
Height Sensor	Optional	
Approvals / Warranty	CE, RoHS, WEEE, China RoHS / 1 year, limited	

Nordson EFD guarded safety enclosures integrate seamlessly with our complete line of automated dispensing systems. Featuring external dispensing controls, a safety light curtain, and an internal electrical control box and wireways for faster, safer setup, these CE-compliant enclosures also fully comply with EU Machinery Directive 2006/42/EC.

Features and Benefits

- Light curtain meets safety requirements while providing easy access to the dispensing system when necessary
- Complete control of the system from the outside of the enclosure, including Start, Emergency Stop, and Run/Teach
- Solid construction resists bumps and jolts to maintain dispensing accuracy
- High-quality enclosure protects operators from operational hazards
- Protects the dispensing system from environmental conditions
- Compliant with EU Machinery Directive 2006/42/EC, essential for all production requirements

Complete Guarded System

7362738 Small Safety Enclosure
Compatible robot models E2, E2V, E3, E3V, R3, R3V, PRO3, PRO3L, PROPlus3, PROPlus3L.

7362766 Small Safety Enclosure, Europe
Compatible robot models E2, E2V, E3, E3V, R3, R3V, PRO3, PRO3L, PROPlus3, PROPlus3L.

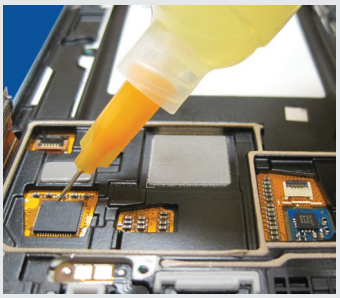
7362739 Large Safety Enclosure
Compatible robot models E4, E4V, E5, E5V, R4, R4V, PRO4, PRO4L, PROPlus4, PROPlus4L.

7362767 Large Safety Enclosure, Europe
Compatible robot models E4, E4V, E5, E5V, R4, R4V, PRO4, PRO4L, PROPlus4, PROPlus4L.

"Automated tabletop dispensing has significantly increased productivity by removing the variability from our process. It has also reduced our rejects by up to 90%."
– Electrodynamics Inc.

Solder Solutions

Paste / Flux / Thermal Compound



Nordson EFD is a recognized leader in developing, manufacturing and distributing non-clogging solder pastes for dispensing applications, as well as high-quality solder pastes for SMT print applications and flux pastes for repair and rework processes. We named our solder products SolderPlus®, PrintPlus®, and FluxPlus™ because we offer more than superior solder pastes for dispense and print applications — we also provide award-winning, worldwide support to help our customers resolve their soldering challenges.

Quality is key. Nordson EFD solder products are manufactured and filled in our ISO9001:2008 operations. The solder and flux pastes are packaged in our own high-quality syringe barrels and cartridges to ensure consistent solder deposits and seamless integration with our electropneumatic dispensers, dispense valves and dispensing robots.

Our outstanding customer service has been recognized numerous times with Circuits Assembly's prestigious Service Excellence Award. Our focus on innovative solutions has also been acknowledged multiple times with honors like the SMT Vision Award. We also won the "International Solar Technology Cell Award — Best Technology for Module Assembly" in recognition of our role as a key supplier in the photovoltaics market.

We invite you to experience the SolderPlus, PrintPlus, and FluxPlus difference for yourself by contacting our experienced solder specialists, who will be happy to assist you in selecting the best products for optimizing your soldering process.

SMTA MEMBER

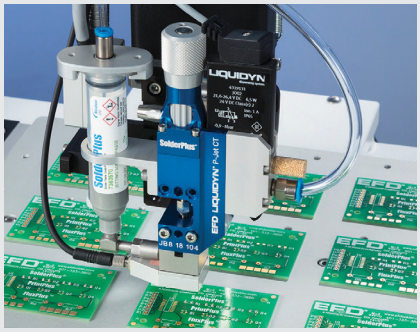
IPC Member

Nordson EFD

Solder Products

SolderPlus Dispensing Paste

SolderPlus dispense pastes are used where solder joints are needed but printing is not possible, and solder wire is neither practical nor efficient. SolderPlus pastes are specifically formulated for dispensing applications — by EFD, a global leader in dispensing solutions. When paired with our electro-pneumatic dispensers, dispense valves, and robots, we can provide a complete solder paste dispensing solution.

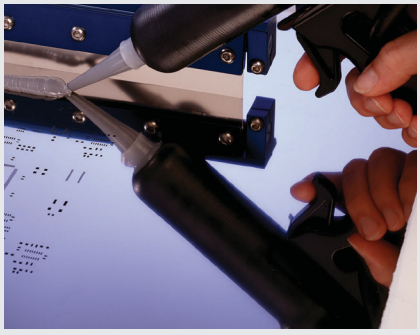


Features and Benefits

- Consistent deposit sizes
- No missed deposits
- Clog-free, top-to-bottom dispensing of the entire barrel
- Packaged in EFD's high quality barrels for best dispensing performance

PrintPlus Print Paste

EFD's PrintPlus solder pastes are formulated for application on printed circuit boards through stencils. The dependable performance and wide process windows helps reduce manufacturing costs by increasing first-pass yields and reducing defects, rework and rejects. PrintPlus solder pastes are available in a wide range of lead-free and leaded alloys and particle sizes, as well as many flux formulations, including no clean, RMA, and water soluble with halogen-/ halide-free options.

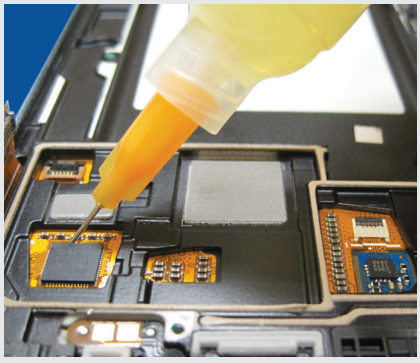


Features and Benefits

- Superior batch-to-batch consistency
- Bright, smooth, and shiny fillets
- Consistent print quality with good print definition
- Long stencil life

FluxPlus Dispensing Paste

EFD's tacky FluxPlus paste can be applied exactly where it is needed, and will remain in position without contaminating nearby areas. FluxPlus is available in a dispense version for repairs, and a stencil print version for reballing BGAs, where its red color facilitates confirmation that flux was applied correctly.

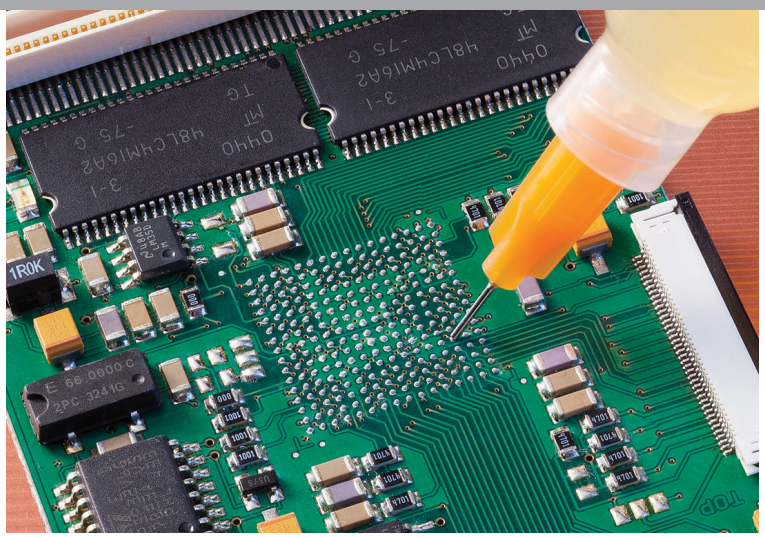


Features and Benefits

- High activity
- Easy to dispense
- Available in no clean, RMA, and water soluble

"Here's what I like about your service. First, SolderPlus is great and worry-free. Second, you are all extremely service-oriented, and finally, you meet all your commitments."

– Welch Allyn



There are many possible options when formulating a solder paste. EFD's general purpose solder pastes will meet the requirements of most applications.

For special requirements, EFD offers a wide range of specialized formulations. To find out which solder paste is the best solution for your application, please contact your Nordson EFD solder sales specialist for a free consultation.

Paste Features

Halide-Free We offer a range of halide-free solder pastes that meet environmental trends and regulations. Halides such as Chloride, Bromide, Fluoride or Iodide are used in some flux activators to assist in oxide removal.

Rapid Reflow Our rapid reflow solder pastes will not spatter when heated and melted as quickly as 0.25 seconds by solder iron, induction, laser, hot bar or other rapid reflow devices.

Pin Transfer or Dipping Solder paste that is applied by dipping a component or pin into the paste. For applications that do not lend themselves to printing or dispensing, such as pin arrays or manufacture of LEDs.

Low Residue The quantity of flux residue left after reflow is less than with normal solder pastes. Either there is less flux to begin with, or a larger percentage evaporates as part of the reflow process.

Difficult-to-Solder Surfaces Solder paste for difficult-to-wet metals such as Alloy42 lead finishes and highly oxidized surfaces of aged components and boards.

Gap Filling and/or Vertical Surfaces The flux is designed to hold the alloy in place until liquidus is reached. These formulas are suited to bridging gaps, filling holes, and soldering joints on vertical surfaces.

Solder Formulations

Flux Choices:

No Clean (NC)
NC flux has low activity and is suited to easily solderable surfaces. NC residue is clear, hard, non-corrosive, nonconductive, and designed to be left on your assembly. Residue may be removed with an appropriate solvent.

Rosin Mildly Activated (RMA)
Most RMA flux is fairly low in activity and best suited to easily solderable surfaces. RMA flux residue is clear, soft, non-corrosive, and non-conductive. Cleaning is optional. Residue may be removed with an appropriate solvent.

Rosin Activated (RA)
RA flux has higher activity than RMA for moderately oxidized surfaces. RA flux residue is corrosive and should be removed as soon as possible after reflow to prevent damage to your assembly.

Water Soluble (WS)
WS flux comes in a wide range of activity levels for soldering to even the most difficult surfaces. WS flux residue is corrosive and should be removed as soon as possible after reflow to avoid damage to your assembly.

LEAD-FREE ALLOY CHART

Alloy:	Solidus (°C)	Liquidus (°C)	Tensile Strength (psi)
Sn42 Bi57 Ag1.0	137	139	4641
Sn42 Bi58	138		8000
Sn96.5 Ag3.0 Cu0.5	217	219	8900
Sn96.3 Ag3.7	221		8900
Sn95 Ag5	221	245	10100
Sn100	MP	232	1800
Sn99.3 Cu0.7	227		n/a
Sn95 Sb5	232	240	5900
Sn89 Sb10.5 Cu0.5	242	262	12000
Sn90 Sb10	250	257	n/a

ALLOY CHART

Alloy:	Solidus (°C)	Liquidus (°C)	Tensile Strength (psi)
Sn43 Pb43 Bi14	144	163	6120
Sn62 Pb36 Ag2	179	189	6700
Sn63 Pb37	183		6700
Sn60 Pb40	183	191	6200
Sn10 Pb88 Ag2	268	290	4900
Sn10 Pb90	275	302	4600
Sn5 Pb92.5 Ag2.5	287	296	4210
Sn5 Pb95	308	312	4190

POWDER SIZE CHART

Powder Type	Powder Size (micron)	Gullwing Lead Pitch (mm)	Square/Circle Aperture (mm)/(in)	Dispense Dot Dia. (mm)/(in)
II	45–75µ	0.65 / 0.025	0.65 / 0.025	0.80 / 0.030
III	25–45µ	0.50 / 0.020	0.50 / 0.020	0.50 / 0.020
IV	20–38µ	0.30 / 0.012	0.30 / 0.012	0.30 / 0.012
V	15–25µ	0.20 / 0.008	0.15 / 0.006	0.25 / 0.010
VI	5–15µ	0.10 / 0.004	0.05 / 0.002	0.10 / 0.004

Thermal Compounds

Our innovative, non-silicone thermal compounds provide an ideal thermal solution by ensuring reliable heat transfer over a longer time than most industrial thermal interface materials. EFD's thermal compounds are formulated to virtually eliminate pump-out, ensuring long-lasting thermal management and effective heat transfer.

The long-term material stability of our compounds ensures they will not leach, dry, harden, or melt in normal industrial conditions. Each contains the characteristics needed to produce optimal results in specific applications.

- High-temperature operation at 250° C continuous
- Low/no outgassing for vacuum environments
- High dielectric strength
- Water cleanable for easy use and clean-up

	SPECIFICATIONS									
Formula	52022	52050	52054	52055	52060	52160	52070	52153	52034	52130
Specific Gravity at 25° C	2.7	2.6	3.0	2.8	2.8	2.6	2.3	2.8	2.8	3.7
Bleed: 24 Hrs., % Weight	0.1	0.01	0.0	0.0	0.3	0.3	0.3	0.0	0.2	0.2
Evaporation: 24 Hrs., % Weight	0.6	0.1	1.0	1.0	0.5	0.5	0.5	0.0	0.5	0.5
Thermal Conductivity: W/m-K	0.92	3.8	1.3	1.3	6	2	7.4	3.5	5	1.5
Thermal Resistance: ° C/W	0.08	0.0671	0.031	0.0334	0.0369	0.04	0.085	0.1	0.08	0.3207
Dielectric Strength: V/mil	305	351	265	265	n/a	n/a	n/a	318	n/a	353
Dielectric Constant: 25° C, 1000Hz	4.5	4.92	5.02	5.02	n/a	n/a	n/a	5	n/a	4.86
Dissipation Factor: 25° C, 1000Hz	0.0029	0.0032	0.0022	0.0022	n/a	n/a	n/a	0.0027	n/a	0.0019
Volume Resistivity: Ohm-cm	1.65x10^14	1.0x10^13	2.0x10^15	2.0x10^15	over current	over current	over current	2.15x10^15	over current	7.28x10^13
Operating Temperature: ° C	-40 to 200	-40 to 200	-40 to 180	0 to 180	-40 to 200	-40 to 200	-40 to 200	-40 to 200	-40 to 260	-40 to 275
Flow Rate: g/min	4 to 7	1 to 3	7 to 10	2 to 7	1 to 2	3 to 6	0.5 to 1.5	2 to 6	1 to 2	2 to 5
Bond Line: mm (minimum)	0.0381	0.0508	0.0127	0.0127	0.0508	0.0254	0.1270	0.1270	0.0508	0.0127
Viscosity: 25° C kCps	460	350	470	620	400	230	600	1100	1000	460
Viscosity: 50° C kCps	400	60	410	550	270	170	700	400	600	250
Appearance	Smooth, off-white paste	Dark gray paste	Smooth white paste	Smooth white paste	Dark gray paste	Smooth, gray paste	Stiff, dark gray paste	Stiff, gray paste	White paste	Off-White paste
Shelf Life	5 years	5 years	2 years	2 years	5 years	5 years	5 years	5 years	5 years	5 years

Two-Component Dispensing Systems

Cartridges / 2K Dispensers / Mixers / Meter Mix Valves

Leading the Way in 2K

Nordson EFD's 2K product line provides static mixers, cartridge systems, and meter mix valves for reactive two-component (2K) adhesives & sealants such as epoxies, urethanes, silicones, and acrylics.

Mixing Solutions

- Two mixer geometries: Spiral and Square
- Complete line of plastic and metal mixers for low- and high-pressure applications
- Two-component cartridge systems from 1.0 to 1500mL capacities
- Designed and manufactured in the USA and ISO 9001:2015 certified
- Competitive pricing, high quality, fast delivery, and superior customer service

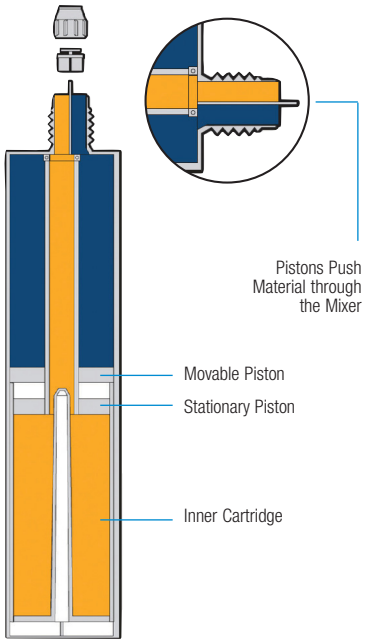
Custom Cartridges

Nordson EFD can mold cartridges in custom colors to your specifications. Simply provide us with a sample of the color or PMS number. Minimum order quantity required. Contact us for details.

Custom Mixers

Nordson EFD has the capability to produce custom mixers for specific materials and applications. Many times we are able to incorporate standard components into custom mixers, which make these an especially cost-effective option.

Nordson EFD



u-TAH Universal Cartridge Systems

Recommended Mixers:

Series 480, 280, 281N, 160, 160AA, 161N, and 260

Recommended Pistons:

u-TAH cartridges come with pre-installed solid multi-seal pistons

Recommended Dispensers:

Standard professional caulking gun

Our u-TAH® Universal Cartridge System is a breakthrough in two-component cartridge design.

The u-TAH Cartridge looks identical to standard caulking cartridges — in fact, you might not realize it is two-component until you begin to dispense your product. It is the only cartridge system that maintains accurate ratio control and fits into your existing 1/10th gallon or 310mL caulking gun. This system also fits into pneumatic (rod-driven) and battery-powered caulking tools.

The standard u-TAH cartridge contains bleed vents to allow air to escape during filling. When using low viscosity materials (less than 1,000 cps), a “non-vented” version is available. Contact us for more information.

QUALITY TESTED FOR ROBUSTNESS

- The u-TAH cartridge body is molded of a rigid plastic that won't burst during the most demanding applications.
- The interior components are fully assembled, and each cartridge is air tested.
- This 100% factory inspected process guarantees that, after filling, the cartridge will maintin a superior shelf life and provide trouble-free applications in the field.

u-TAH UNIVERSAL CARTRIDGE SYSTEMS

Ratio	Part #	Description	Maximum Volume	Material
1:1	7703997	1:1 u-TAH Cartridge System	250mL	PP
1:1	7704048	1:1 u-TAH Cartridge System	250mL	Nylon
2:1	7702991	2:1 u-TAH Cartridge System	180mL	PP
10:1	7702996	10:1 u-TAH Cartridge System	280mL	Nylon

u-TAH Cartridge Flow Restrictors

Nordson EFD recommends the use of our Flow Restrictor when dispensing u-TAH cartridges filled with low viscosity fluids. Thin adhesives are often too free flowing and can cause cross-contamination, lead/lag problems, and plugging. Our low-cost, plastic Flow Restrictor eliminates these issues by slowing the thinner component’s flow. Use the smallest orifice possible, based on material viscosity.

u-TAH FLOW RESTRICTORS

Part #	Orifice Size (in/mm)	Color
7702861	0.062 / 1.5	Translucent
7702862	0.092 / 2.4	Black

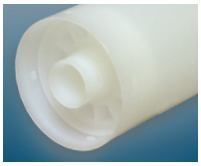

Flow restrictor


Remove plug


Insert restrictor


Attach mixer

www.nordsonefd.com/uTAH



Coaxial design (staked)

Large bores for greater flow

380mL Coaxial Cartridge Systems

Recommended Mixers:

Series 480, 280, 281N, 160, 160AA, 161N, and 260

Recommended Pistons:

Coaxial cartridges come with pre-installed solid multi-seal pistons. Option to purchase without pistons pre-installed.

Recommended Dispensers:

Manual Dispense Gun (380mL)

The 380mL coaxial cartridge has a center tube that contains one material and an outer “doughnut” that contains a second material in a 10:1 ratio.

Features and Benefits

- Robust neck outlet prevents cracking
- Rotating valve opens and closes outlet
- Large valve bores for greater flow
- Molded valve seals ensure long, leak-free shelf life
- Partially used cartridges are easily re-sealed by closing valve
- Pre-inserted pistons for ease of filling through the nose
- Cartridges are staked to retain pre-installed piston after filling

380 ML COAXIAL CARTRIDGE SYSTEMS

Ratio	Part #	Description	Material
10:1	7026776	380mL coaxial cartridge assembly	Nylon
10:1	7026777	Cartridge body with valve (no staking)*	Nylon
10:1	7704170	Inner piston*	PE
10:1	7704171	Doughnut piston*	PE
10:1	7702589	Valve wrench*	–

*Sold separately

Open End Outlet

Closed End Outlet

Side x Side Cartridge Systems

Nordson EFD offers a comprehensive selection of high-quality, competitively-priced Side x Side cartridges for packaging and dispensing two-component materials used in automotive, construction, industrial, medical, and dental applications.

"Innovation truly drives the success of the adhesives and sealants industry, and we created the ASI Readers' Choice Awards to celebrate all of the industry's hard work and ingenuity. I am thrilled to announce that Nordson EFD received the most votes in the Equipment category."

– ASI Magazine

Features and Benefits

- Eliminates mess and waste
- Reduces exposure to hazardous resins
- Ensures accurate proportioning and mixing

Cartridge System Outlet Options

Select from two types of Side x Side cartridge outlets:

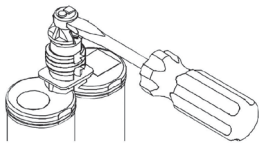
Open End Outlet

- Pre-assembled with traditional nose plugs and retaining nuts
- Many can be molded in polypropylene (PP) or nylon
- See specific cartridge descriptions or contact EFD for material options

Hermetically-sealed Closed End Outlet

- Features a patented "pry-off" closure
- Molded in one operation
- Cost-effective alternative to open end cartridges

PRY-OFF CAP INSTRUCTIONS



- Insert flat head of screwdriver into slot and pry upward
- Cap can be re-inserted to seal a partially used cartridge. To avoid cross contamination, match up the circles and squares on the cap and top of cartridge body
- For 50mL cartridges, the cap can be easily snapped off with your thumb and forefinger in the same upward motion

Side x Side Cartridge Flow Restrictors

EFD's low-cost, plastic Flow Restrictor for Side x Side closed-end cartridges eliminates problems caused by low viscosity fluids by slowing the thinner component's flow. See u-TAH Cartridge Flow Restrictors for details.

SIDE x SIDE FLOW RESTRICTORS

Part #	Orifice Size (in/mm)	Color
7702804	0.062 / 1.5	White
7702805	0.092 / 2.4	Black

2K Cartridges

Part # (PP)	Part # (Nylon)	Usable Volume	Description	1:1	2:1	4:1	10:1
50mL SIDE X SIDE CARTRIDGE SYSTEMS							
7015724	7702891	50mL	Open-End Cartridge w/Protective Cap	✓			
7702619	7702621	50mL	Closed-End Cartridge w/Protective Cap	✓			
7704061 (PE/PBT)		—	AF Air Free Piston	✓			
7702687		—	EPDM+ O-Ring Piston (Short)	✓			
7702692	7702698	—	EPDM O-Ring Piston (Tall)	✓			
7702702	7702704	—	Multi-seal Piston w/Pre-staged Center Bleed Plug	✓			
7702892	7702895	50mL	Open-End Cartridge w/Retainer & Plug		✓		
7702627		50mL	Closed-End Cartridge w/Protective Cap		✓		
7702705	7702709	—	EPDM O-Ring Piston (Large side)		✓	✓	✓
7702714	7702717	—	EPDM O-Ring Piston (Small side)		✓		
7702896	7702898	42mL	Open-End Cartridge w/Retainer & Plug			✓	
7702721	7702725	—	EPDM O-Ring Piston (Small side)			✓	
7702900	7702902	37mL	Open-End Cartridge w/Retainer & Plug				✓
7702728	7702732	—	EPDM O-Ring Piston (Small side)				✓
160mL and 200mL SIDE X SIDE CARTRIDGE SYSTEMS							
7702939		160mL	Closed-End Cartridge w/Protective Cap	✓			
7703001		215mL	Open-End Cartridge w/Installed Nose Plug & 3/8" Nut	✓			
7703004		215mL	Open-End Cartridge w/Installed Nose Plug & 1/2" Nut	✓			
7702942	7702947	215mL	Closed-End Cartridge w/Protective Cap	✓			
7704307 (PE/PBT)		—	AF Air Free Piston	✓			
7702744*	7702745*	—	Multi-seal Piston w/Pre-staged Bleed Plug	✓			
7702950	7015947	222mL	Closed-End Cartridge w/Protective Cap		✓		
7702672*		—	Solid Multi-seal Piston (Small side)		✓		
7702674*		—	Solid Multi-seal Piston (Large side)		✓		
7702752*	7015948	—	Multi-seal Piston w/Pre-staged Bleed Plug (Small side)		✓		
7702754*	7015949	—	Multi-seal Piston w/Pre-staged Bleed Plug (Large side)		✓		
300mL SIDE X SIDE CARTRIDGE SYSTEMS							
7702956	7702961	323mL	Closed-End Cartridge w/Protective Cap	✓			
7704307 (PE/PBT)		—	AF Air Free Piston	✓			
7702744*	7702745*	—	Multi-seal Piston w/Pre-staged Bleed Plug	✓			
400mL SIDE X SIDE CARTRIDGE SYSTEMS							
7703011		406mL	Open-End Cartridge w/Installed Nose Plug & 3/8" Nut	✓			
7703013	7028234*	406mL**	Open-End Cartridge w/Installed Nose Plug & 1/2" Nut	✓			
7702965	7702968	406mL	Closed-End Cartridge w/Protective Cap	✓			
7702677*	7702678*	—	Solid Multi-seal Piston	✓			
7702757*	7702759*	—	Multi-seal Piston w/Pre-staged Bleed Plug	✓			
600mL SIDE X SIDE CARTRIDGE SYSTEMS							
7702971		630mL	Closed-End Cartridge w/Protective Cap	✓			
7702684*		—	Solid Multi-seal Piston	✓			
7702765*		—	Multi-seal Piston w/Pre-staged Bleed Plug	✓			
1500mL SIDE X SIDE CARTRIDGE SYSTEMS							
7703811		1500mL	Closed-End Cartridge w/Protective Cap	✓			
7704044 (PE)		—	Solid Multi-seal Piston	✓			

*These multi-seal pistons are available with O-rings. Contact Nordson EFD for details.
**Max volume on 400mL Open-End Nylon is 400mL
+Ethylene Propylene Diene Monomer

Recommended 50mL Mixers:

Series 295 and 190

Dispensers:

50mL Manual Dispenser

50mL Caulking Gun Conversion Kit

2K Equalizer (50 ml)

Recommended 160–1500mL Mixers:

Series 480, 280, 281N, 160, 160AA, 161N, and 260

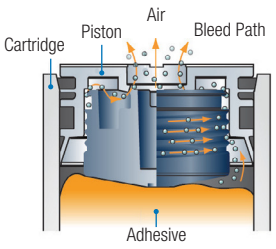
Dispensers:

Manual Dispense Gun (160–1500mL)

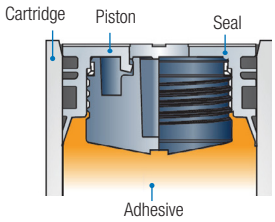
Pneumatic Dispense Gun (400–1500mL)

Cordless Dispense Gun (400–1500mL)

2K Pistons



Opened Piston



Closed Piston

AF Air Free Pistons

The AF™ Air Free Piston does a superior job of venting all of the air between the material and the piston. Its unique design does not require a shim to bleed the air, nor does it require a second step to insert a center bleed plug. This piston bleeds air around the circumference of the black plug and uses the force of hitting the material to close itself in a single step.

The AF piston provides a more visible indication when the piston is completely closed, i.e. the black center plug is flush with the top of the piston. Further, since the material of construction of the AF piston is a PE/PBT combo, it is compatible with most materials, simplifying inventory.

AF AIR FREE PISTONS		
Part #	Ratio	Cartridge Type
7704061	1:1	50mL Side x Side
7704307	1:1	200–300mL Side x Side

For other pistons, see cartridge P/N tables.

www.nordsonefd.com/AFpistons

Features and Benefits

- Eliminates trapped air
- No need for shims or secondary plugging operations
- Ensures on-ratio dispensing
- Fast, foolproof operation
- Prevents material separation

Other 2K Pistons

- Solid Multi-seal
- Solid with O-ring
- Multi-seal with a Pre-staged Center Bleed Plug
- For use with Side x Side cartridges; see previous pages for part numbers
- Both u-TAH and Coaxial cartridges come pre-installed with solid multi-seal pistons

Atlas™ 2K Piston Inserters are a fast, convenient, and cost-effective way to install AF pistons in 50mL, 200mL, and 300mL Side x Side cartridges.

Atlas 2K Piston Inserter

Features and Benefits

- Simple to set up and operate
- Pistons seat correctly every time
- Compact, space-saving footprint
- Rugged, lightweight units are easily transported for different jobs
- Optional conversion kits let 50mL unit handle 200mL cartridges, and 200mL unit handle 50mL cartridges. The 300mL unit can also handle 200mL cartridges.
- Designed for use with AF Air Free pistons that virtually eliminate trapped air

2K PISTON INSERTERS	
Part #	Description
7015502	50mL Piston Inserter
7015503	200mL Piston Inserter
7362105	300mL Piston Inserter

50mL Manual Cartridge Dispensers

Our manual dispenser features a versatile, compact, durable, and well-balanced design providing trouble-free, point-of-use dispensing. Custom colors and distinctive labeling are available upon request. Lightweight design accepts all ratios.

Features and Benefits

- Better Ergonomics: Lighter and more compact
- Lower cost and better delivery
- More Versatile: Accepts all ratios
- Durable: Designed to eliminate cartridge cracking

50mL MANUAL CARTRIDGE DISPENSERS

Ratio	Part #	Description	Part #	Description
1:1	7703145	Dispenser & Plunger	7703040	Plunger only
2:1	7703160	Dispenser & Plunger	7703043	Plunger only
4:1	7703161	Dispenser & Plunger	7703045	Plunger only
10:1	7703162	Dispenser & Plunger	7703046	Plunger only
—	7703139	Dispenser only	—	—

50mL Caulking Gun Conversion Kit

Nordson EFD's Caulking Gun Conversion Kit accepts most multi-ratio 50mL Cartridge Systems (1:1, 2:1, 4:1, and 10:1) including competitive 50mL bayonet cartridges. A different plunger is required for each.

Features and Benefits

- Versatile: Can be used with standard professional caulking guns
- Practical: Great for DIY/home repair, field installations, and occasional industrial use
- Cost-Effective: Ideal for sampling your adhesives

7703163
1:1 Conversion Kit

7703167
2:1 Conversion Kit

7703170
4:1 Conversion Kit

7703172
10:1 Conversion Kit

Equalizer 2K Dispensing Tool

The pneumatically operated Equalizer™ 2K dispensing tool makes it possible to dispense accurate, repeatable amounts of 2-component materials. It is designed for use with EFD dispensers and 50mL Side x Side cartridges and static mixers (order separately).

Features and Benefits

- Eliminates hand fatigue associated with manual dispensers
- Ideal for pre-mixing and downpacking from 2K cartridges into syringe barrels

7360152
Standard configuration provides accurate 50mL 1:1 and 2:1 dispensing.

7015864
Transfer Kit allows downpacking of 2K materials.

7360401
Conversion Kit allows use with 4:1 cartridges.

7015875
Kit Universal Stand Mount 25–50 mm.

2K Dispense Guns

Nordson EFD 2K dispense guns offer user-friendly features and the same legendary quality and state-of-the-art engineering that has become synonymous with the Nordson EFD name. Lightweight and durable, these tools make applying two-component adhesives quicker and easier.

Select from 3 convenient options:

- **Manual:** Provides portable dispensing of two-component materials with a 26:1 thrust ratio.
- **Pneumatic:** Uses air pressure up to 120 psi (8.2 bar) to easily dispense thick 2K materials. Also an excellent tool for crack injection applications.
- **Cordless:** Intuitive design allows operators to dispense 2K materials without the need of any wiring or cumbersome hoses; can dispense with up to 950 lb (431 kg) of force.

Manual

Pneumatic

Cordless

2K DISPENSE GUNS			
Part #	Description	Side x Side Cartridge	Weight (lb/kg)
	Manual Guns		
7360831	1:1 Manual Dispenser Top Load	160mL	3.1 / 1.4
7029675	1:1/2:1 Manual Dispenser Side Load	200mL	2.6 / 1.2
7029680	1:1 Manual Dispenser Top Load	300mL	3.3 / 1.5
7029682	10:1 Coax Manual Dispenser	380mL	2.6 / 1.2
7029676	1:1/2:1 Manual Dispenser Side Load	400mL	2.9 / 1.3
7029677	1:1/2:1 Manual Dispenser Top Load	600mL	4.0 / 1.8
7029681	1:1 Manual Dispenser Top Load	1500mL	6.8 / 3.1
	Pneumatic Guns		
7029678	1:1/2:1 Pneumatic Dispenser	400mL	7.6 / 3.4
7029679	1:1/2:1 Pneumatic Dispenser	600mL	8.5 / 3.9
7360275	1:1 Pneumatic Dispenser	1500mL	11.4 / 5.2
	Cordless Guns		
7029910	1:1/2:1 Cordless Dispenser	400mL	8.9 / 4.0
7362112	10:1 Cordless Dispenser	490mL	12.0 / 5.4
7029911	1:1/2:1 Cordless Dispenser	600mL	11.6 / 5.3
7029912	1:1 Cordless Dispenser	1500mL	13.1 / 6.0
7361820	1:1/2:1 Cordless Dispenser UK	400mL	13.2 / 6.0
7361565	1:1/2:1 Cordless Dispenser EU	400mL	8.9 / 4.0
7362113	10:1 Cordless Dispenser EU	490mL	12.0 / 5.4
7361566	1:1/2:1 Cordless Dispenser EU	600mL	11.6 / 5.3
7361567	1:1 Cordless Dispenser EU	1500mL	13.1 / 6.0
7361821	1:1/2:1 Cordless Dispenser UK	600mL	14.3 / 6.5
7361822	1:1 Cordless Dispenser UK	1500mL	15.41 / 7.0
7361168	18 Volt Battery	—	0.9 / 0.4
7361169	18 Volt Battery Charger	—	1.4 / 0.6
7361170	18 Volt Battery EU Charger	—	1.5 / 0.7
7361711	18 Volt Battery UK Charger	—	1.5 / 0.7

Warranty: One year, limited.

Disposable Static Mixers

Nordson EFD offers a wide variety of static mixers, including square OptiMixers™ and Turbo™ Mixers or round Spiral™ Mixers. It's important to note, you should always use an OptiMixer or Turbo unless your application requires elements with a small diameter or long reach.

Mixer Selection

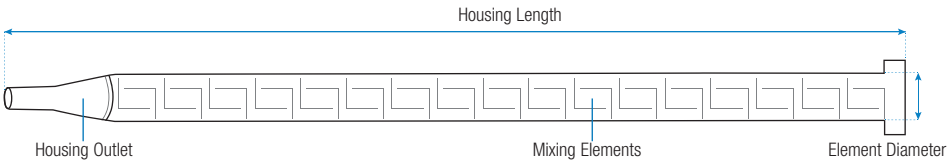
Choose the higher number of elements if one of two things occurs. Ask an EFD application specialist for recommendations.

1. Material A and B are of very different viscosities.
2. Material A and B are very wide in mix ratio (i.e. 4:1 or greater for certain types of fluids).

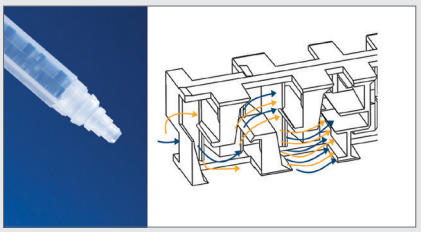
Fluid	# OF MIXER ELEMENTS
Acrylic	8 – 10
Epoxy	15 – 24
Polysulfide	24 – 32
PU Foam	10 – 24
Silicone	20 – 30
Urethane	24 – 36

MATERIAL VISCOSITY	
Viscosity	Mixer Element Diameter
Thin < 5,000 cps (Thinner than syrup)	0.093–0.25" (2.4–6.4 mm)
Medium 5,000 – 50,000 cps (Thicker than honey, less than ketchup)	0.212–0.314" (5.4–8.0 mm)
Thick > 50,000 cps (Thicker than ketchup)	> 0.366" (9.3 mm)

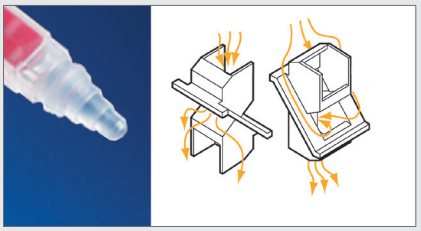
Mixer Dimension Guide



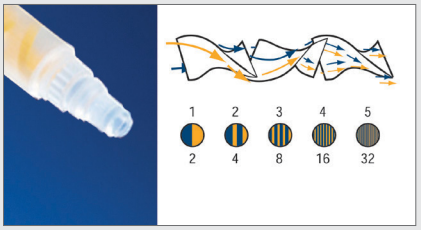
How Mixers Work — Element Geometry



OptiMixer (Square)



Turbo Mixer (Square)



Spiral Mixer

Disposable Static Mixers Quick Reference

DISPOSABLE STATIC MIXERS QUICK REFERENCE			
Page	Mixer	Cartridge Volume & Type	Element / Housing
99	Square OptiMixer 480	u-TAH (all), Coax 380mL, Side x Side 200–1500mL	Acetal / PP
101	Turbo 295	Side x Side 50mL	PP / PP
100	Turbo 280	u-TAH (all), Coax 380mL, Side x Side 200–1500mL	PP / PP
100	Turbo 281N	u-TAH (all), Coax 380mL, Side x Side 200–1500mL	Acetal, PP / PP
102	Spiral 160	u-TAH (all), Coax 380mL, Side x Side 200–1500mL	Acetal / PP
104	Spiral 160AA	u-TAH (all), Coax 380mL, Side x Side 200–1500mL	Acetal / PP
104	Spiral 161N	u-TAH (all), Coax 380mL, Side x Side 200–1500mL	Acetal / PP
105	Spiral 260	u-TAH (all), Coax 380mL, Side x Side 200–1500mL	PP / PP
101	Spiral 190	Side x Side 50-160mL	Acetal / PP

SERIES 480 OPTIMIXERS (SQUARE)

Using proprietary flow simulation technology to improve the material flow path design and element wedges, the OptiMixer Series 480 delivers better mix quality in a 20% shorter length, without impacting other performance factors. It allows users to dispense in closer proximity to applications, providing greater control and higher job quality with 30% less retained volume. Integral nut mixers have a 7/8-9 thread. SmartLok™ adapters are designed to adapt Nordson EFD OptiMixer mixers to F-System Side x Side cartridges.

Element Width 0.344 / 8.7 (in/mm)

Part #	# Mixing Elements	Housing Length (in/cm)	Housing Inlet*	Housing Outlet	Retained Volume (ml)	Element / Housing	Color
7361685***	9	2.9 / 7.4	Integral Nut	Barbed	1.6	Acetal / PP	—
7361689	17	4.0 / 10.2	Integral Nut	Stepped	4.7	Acetal / PP	—
7361693	17	4.0 / 10.2	Integral Nut	Barbed	4.7	Acetal / PP	—
7361695	25	5.1 / 13.0	Bell**	Stepped	6.5	Acetal / PP	—
7361697	25	5.6 / 14.2	Integral Nut	Stepped	6.5	Acetal / PP	—
7361701	25	5.6 / 14.2	Integral Nut	Barbed	6.5	Acetal / PP	—
7361703	33	6.3 / 16.0	Bell**	Stepped	7.5	Acetal / PP	—
7361705	33	6.8 / 17.3	Integral Nut	Stepped	7.5	Acetal / PP	—
7361707	41	8.1 / 20.6	Integral Nut	Stepped	10.0	Acetal / PP	—
OPTIMIXERS ASSEMBLED WITH SMARTLOK ADAPTERS							
7362807	17	4.0 / 10.2	10:1 / 4:1	Stepped	4.7	Acetal / PP	White
7362816	17	4.0 / 10.2	1:1 / 2:1	Stepped	4.7	Acetal / PP	Blue
7362808	17	4.0 / 10.2	10:1 / 4:1	Barbed	4.7	Acetal / PP	White
7362817	17	4.0 / 10.2	1:1 / 2:1	Barbed	4.7	Acetal / PP	Blue
7362809	25	5.6 / 14.2	10:1 / 4:1	Stepped	6.5	Acetal / PP	White
7362818	25	5.6 / 14.2	1:1 / 2:1	Stepped	6.5	Acetal / PP	Blue
7362810	25	5.6 / 14.2	10:1 / 4:1	Barbed	6.5	Acetal / PP	White
7362819	25	5.6 / 14.2	1:1 / 2:1	Barbed	6.5	Acetal / PP	Blue
7362588	33	6.8 / 17.3	10:1 / 4:1	Stepped	7.5	Acetal / PP	White
7362589	33	6.8 / 17.3	1:1 / 2:1	Stepped	7.5	Acetal / PP	Blue
7362811	41	8.1 / 20.6	10:1 / 4:1	Stepped	10.0	Acetal / PP	White
7362820	41	8.1 / 20.6	1:1 / 2:1	Stepped	10.0	Acetal / PP	Blue
SMARTLOK ADAPTERS ONLY							
7362590	—	—	10:1 / 4:1	—	—	—	White
7362591	—	—	1:1 / 2:1	—	—	—	Blue

*Housing Inlet for OptiMixers assembled with SmartLok adapters are separated bore and color-coded by ratio.
**Needs retaining nut #7702598.
***In prototype.

For use with:

u-TAH Universal Cartridges

380mL Coaxial Cartridges

200–1500mL Side x Side Cartridges

www.nordsonefd.com/2kOptiMixer

SERIES 280 TURBO MIXERS (SQUARE)

The Series 280 11.2 mm Turbo Mixer square geometry can provide superior mixing, allowing the operator to be closer to the application, and reducing the retained waste within the mixer. All mixers have 7/8 - 9 Integral Nut.

Element Width 0.442 / 11.2 (in/mm)

Part #	# Mixing Elements	Housing Length (in/cm)	Housing Inlet	Housing Outlet	Retained Volume (ml)	Element / Housing
7701816	20	7.52 / 19.1	Integral Nut	Short Barb	15.1	PP / PP
7701818	26	9.00 / 22.9	Integral Nut	Short Barb	17.0	PP / PP
7701819	20	9.98 / 25.3	Integral Nut	Special Conical Ribbed	17.9	PP / PP

HANGING BRACKET

The optional "hanging bracket" attaches the Series 280 Mixer to Nordson EFD's u-TAH Cartridge Systems. The double-looped form snaps onto the 11.2 mm nozzle's unique ribs and over the neck of a cartridge creating a durable attachment.

Part #	Description
7703203	Hanging Bracket

For use with:

- u-TAH Universal Cartridges
- 380mL Coaxial Cartridges
- 200–1500mL Side x Side Cartridges

SERIES 281N HIGH-FLOW TURBO MIXERS (SQUARE)

The 14.3 mm High-Flow Turbo Mixer provides higher flow rates with less effort. The square geometry consists of a series of alternating left- and right-hand elements with intermittent flow inverters which effectively channel the fluids from the walls into the center of the mixer. The High-Flow Turbo is designed to fit most disposable cartridges.

Element WIdth 0.562 / 14.3 (in/mm)

Part #	# Mixing Elements	Housing Length (in/cm)	Housing Inlet	Housing Outlet	Retained Volume (ml)	Element / Housing
7701821	19	15.3 / 38.9	Integral Nut*	Short Barb	40.4	PP / PP
7701823	19	15.3 / 38.9	Integral Nut**	Short Barb	40.4	PP / PP

*Part #7701821 has a 7/8 – 14 double lead thread.
**Part #7701823 has a 7/8 – 9 thread.

Disposable Mixers

SERIES 295 BAYONET TURBO MIXERS (SQUARE)

The patented Series 295 Turbo Mixer ensures superior mixing performance and allows the operator to be closer to the workpiece. Designed for 50mL two-component cartridges, the Turbo geometry consists of a series of alternating left- and right-hand elements with intermittent flow inverters. The flow inverters effectively channel the fluids from the walls into the center of the mixer and from the center to the walls.

Part #	# Mixing Elements	Housing Length (in/cm)	Housing Inlet	Housing Outlet	Retained Volume (ml)	Element / Housing
Element Width 0.203 / 5.15 (in/mm)						
7701830	20	4.05 / 10.2	Bayonet	Slip Luer	1.4	PP / PP
7701832	20	3.63 / 9.2	Bayonet	Full Bore	1.4	PP / PP
7701836	20	4.05 / 10.2	Bayonet	Luer Lok	1.4	PP / PP

For use with:

50mL Side x Side Cartridges

SERIES 190 BAYONET MIXERS (SPIRAL)

Featuring a standard Bayonet connection, the Series 190 Mixer is designed for use with 50mL and 160mL two-component cartridges. The Series 190 has five diameters available with four outlet styles: Slip Luer, Full Bore, H-Tapered, and Stepped. The Slip Luer is our standard offering. The Full Bore ensures maximum flow with minimal back pressure.

Part #	# Mixing Elements	Housing Length (in/cm)	Housing Inlet	Housing Outlet	Retained Volume (ml)	Element / Housing
Element Diameter 0.093 / 2.36 (in/mm)						
7701408	12	1.5 / 3.8	Bayonet	Slip Luer	0.10	Acetal / PP
Element Diameter 0.125 / 3.18 (in/mm)						
7701411	12	2.1 / 5.3	Bayonet	H-Tapered*	0.20	Acetal / PP
7701416	24	3.4 / 8.6	Bayonet	H-Tapered*	0.40	Acetal / PP
Element Diameter 0.187 / 4.75 (in/mm)						
7701417	8	1.6 / 4.1	Bayonet	Full Bore	0.40	Acetal / PP
7701424	16	3.4 / 8.6	Bayonet	Slip Luer	0.90	Acetal / PP
7701436	16	3.4 / 8.6	Bayonet	H-Tapered*	0.90	Acetal / PP
Element Diameter 0.213 / 5.40 (in/mm)						
7701438	7	2.3 / 5.8	Bayonet	Slip Luer	0.90	Acetal / PP
7701449	17	4.4 / 11.2	Bayonet	Stepped	1.90	Acetal / PP
7701453	21	5.3 / 13.5	Bayonet	Stepped	2.40	Acetal / PP
Element Diameter 0.250 / 6.35 (in/mm)						
7701458	12	3.9 / 9.9	Bayonet	Slip Luer	1.90	Acetal / PP
7701486	16	4.8 / 12.2	Bayonet	Stepped	2.50	Acetal / PP
7701487	20	5.9 / 15.0	Bayonet	Slip Luer	3.00	Acetal / PP
7701488	20	5.9 / 15.0	Bayonet	Stepped	3.00	Acetal / PP
7701510	20	5.9 / 15.0	Bayonet	H-Tapered*	3.00	Acetal / PP
7701507	20	5.3 / 13.5	Bayonet	Full Bore	2.80	Acetal / PP
7701521**	20	5.3 / 13.5	Bayonet	Slip Luer	2.75	Acetal / PP

*The H-Tapered outlet is offered where precise placement of the adhesive is required. In order to connect Luer needles or extensions, it is molded with an interlocking connection. This requires the attachment of a Luer Lok Adapter #7700943 (bag of 50), ordered separately.
**For use with 160mL Side x Side cartridge.

For use with:

50mL–160mL Side x Side Cartridges

MIXER HOUSING OUTLET TYPES

Full Bore | Stepped | Luer Lok | Slip Luer | H-Tapered | Luer Lok Adapter

SERIES 160 BELL INLET MIXERS (SPIRAL)

The mixing nozzle of the Series 160 has a bell inlet which fits Nordson EFD valve manifolds and large volume cartridges that separately port the A and B materials directly into the mixer. Cleanup simply involves removing the mixer and wiping the manifold face clean. In the case of the cartridges, because of the divider fin, simply remove the mixer.

Our one-piece Metal Jacket is recommended if working pressure inside the nozzle exceeds 150 psi (10 bar) (only used with meter mix valves or manifolds). See 2K Accessories. The Series 160 includes 160, 161, 161A, 160AN, and 161AN. Mixer series which end in "A" are designed to work with the EFD ProTip Mixer Accesssory. See next page.

Important: For any bell housing inlet mixer, order plastic retaining nut: #7702595 for 0.189-0366" ID; or #7702598 for 0.5" ID. For Meter Mix Valves, order metal retaining nuts. See Autovalve Accessories for details.

Part #	# Mixing Elements	Housing Length (in/cm)	Housing Inlet	Housing Outlet	Outlet Tip Orifice (in/mm)	Element / Housing
Element Diameter 0.189 / 4.80 (in/mm)						
7700810	8	2.62 / 6.65	Bell	Slip Luer	0.07 / 1.78	Acetal / PP
7026047	8	2.62 / 6.65	Bell	Luer Lok	0.07 / 1.78	Acetal / PP
7700811	16	3.90 / 9.91	Bell	Slip Luer	0.07 / 1.78	Acetal / PP
7700819	24	5.18 / 13.16	Bell	Slip Luer	0.07 / 1.78	Acetal / PP
7700817	24	5.18 / 13.16	Bell	Luer Lok	0.07 / 1.78	Acetal / PP
7700824	32	6.48 / 16.46	Bell	Slip Luer	0.07 / 1.78	Acetal / PP
7700822	32	6.48 / 16.46	Bell	Luer Lok	0.07 / 1.78	Acetal / PP
7700825	48	9.04 / 22.96	Bell	Slip Luer	0.07 / 1.78	Acetal / PP
7700826	48	9.04 / 22.96	Bell	Luer Lok	0.07 / 1.78	Acetal / PP
Element Diameter 0.248 / 6.30 (in/mm)						
7700830	8	3.56 / 9.04	Bell	Slip Luer	0.09 / 2.29	Acetal / PP
7700829	8	3.56 / 9.04	Bell	Luer Lok	0.09 / 2.29	Acetal / PP
7700831	16	5.46 / 13.87	Bell	Slip Luer	0.09 / 2.29	Acetal / PP
7700834	16	5.46 / 13.87	Bell	Luer Lok	0.09 / 2.29	Acetal / PP
7700837	24	7.46 / 18.95	Bell	Slip Luer	0.09 / 2.29	Acetal / PP
7700850	24	7.46 / 18.95	Bell	Luer Lok	0.09 / 2.29	Acetal / PP
7700853	24	7.46 / 18.95	Bell	Luer Lok	0.09 / 2.29	Acetal / PP
7700856	32	9.49 / 24.10	Bell	Slip Luer	0.09 / 2.29	Acetal / PP
7700862	32	9.49 / 24.10	Bell	Luer Lok	0.09 / 2.29	Acetal / PP
7700864	32	9.49 / 24.10	Bell	Luer Lok	0.09 / 2.29	Acetal / PP
7700866	48	13.14 / 33.38	Bell	Slip Luer	0.09 / 2.29	Acetal / PP
7700872	48	13.14 / 33.38	Bell	Luer Lok	0.09 / 2.29	Acetal / PP
7704018	48	13.14 / 33.38	Bell	Luer Lok	0.09 / 2.29	Acetal / PP
Element Diameter 0.314 / 8.00 (in/mm)						
7700873	18	6.96 / 17.68	Bell	Stepped	0.10 / 2.54	Acetal / PP
7700875	18	6.96 / 17.68	Bell	Luer Lok	0.10 / 2.54	Acetal / PP
7700876	24	8.84 / 22.45	Bell	Stepped	0.10 / 2.54	Acetal / PP
7700878	24	8.84 / 22.45	Bell	Luer Lok	0.10 / 2.54	Acetal / PP
7700879	32	11.44 / 29.06	Bell	Stepped	0.10 / 2.54	Acetal / PP
7700882	32	11.44 / 29.06	Bell	Luer Lok	0.10 / 2.54	Acetal / PP
7700939	40	14.14 / 35.92	Bell	Luer Lok	0.12 / 3.05	Acetal / PP
7700941	60	22.4 / 56.90	Bell	Stepped	0.12 / 3.05	Acetal / PP
7700942	64	24.0 / 60.96	Bell	Stepped	0.12 / 3.05	Acetal / PP

Continued next page

For use with:

- u-TAH Universal Cartridges
- 380mL Coaxial Cartridges
- 200–1500mL Side x Side Cartridges
- Meter Mix Valves

From previous page

SERIES 160 BELL INLET MIXERS (SPIRAL)

Part #	# Mixing Elements	Housing Length (in/cm)	Housing Inlet	Housing Outlet	Outlet Tip Orifice (in/mm)	Element / Housing
Element Diameter 0.366 / 9.30 (in/mm)						
7700885	12	5.48 / 13.92	Bell	Stepped	0.12 / 3.05	Acetal / PP
7700892	12	5.48 / 13.92	Bell	Luer Lok	0.12 / 3.05	Acetal / PP
7013510	18	7.28 / 18.49	Bell	Stepped	0.12 / 3.05	Acetal / PP
7700902	18	7.28 / 18.49	Bell	Luer Lok	0.12 / 3.05	Acetal / PP
7700904	24	9.15 / 23.24	Bell	Stepped	0.12 / 3.05	Acetal / PP
7700924	24	9.15 / 23.24	Bell	Luer Lok	0.12 / 3.05	Acetal / PP
7700927	30	11.24 / 28.55	Bell	Stepped	0.12 / 3.05	Acetal / PP
7700931	30	11.24 / 28.55	Bell	Luer Lok	0.12 / 3.05	Acetal / PP
7700932	40	14.14 / 35.92	Bell	Stepped	0.12 / 3.05	Acetal / PP
Element Diameter 0.497 / 12.65 (in/mm)						
7700990	12	6.71 / 17.04	Bell	Stepped	0.18 / 4.57	Acetal / PP
7700995	12	6.71 / 17.04	Bell	Luer Lok	0.18 / 4.57	Acetal / PP
7701001	18	9.08 / 23.06	Bell	Stepped	0.18 / 4.57	Acetal / PP
7701007	18	9.08 / 23.06	Bell	Luer Lok	0.18 / 4.57	Acetal / PP
7701010	24	11.60 / 29.46	Bell	Stepped	0.18 / 4.57	Acetal / PP
7701025	24	11.60 / 29.46	Bell	Luer Lok	0.18 / 4.57	Acetal / PP
7701028	30	14.09 / 35.79	Bell	Stepped	0.18 / 4.57	Acetal / PP
7701035	30	14.09 / 35.79	Bell	Luer Lok	0.18 / 4.57	Acetal / PP
7701038	36	16.63 / 42.24	Bell	Stepped	0.18 / 4.57	Acetal / PP
7701042	36	16.63 / 42.24	Bell	Luer Lok	0.18 / 4.57	Acetal / PP

SERIES 160A MIXERS (SPIRAL)

Identical to Series 160 Bell Inlet Mixers, above, except housing outlet is designed to work with the EFD ProTip Mixer Accesssory. The ProTip allows you to easily apply a ribbon of material.

Part #	# Mixing Elements	Housing Length (in/cm)	Housing Inlet	Housing Outlet	Outlet Tip Orifice (in/mm)	Element / Housing
Element Diameter 0.314 / 8.00 (in/mm)						
7700956	18	6.96 / 17.68	Bell	ProTip	0.10 / 2.54	Acetal / PP
7700957	24	8.84 / 22.45	Bell	ProTip	0.10 / 2.54	Acetal / PP
Element Diameter 0.366 / 9.30 (in/mm)						
7700960	18	7.28 / 18.49	Bell	ProTip	0.12 / 3.05	Acetal / PP
7700969	24	9.15 / 23.24	Bell	ProTip	0.12 / 3.05	Acetal / PP
Element Diameter 0.497 / 12.65 (in/mm)						
7701046	18	9.08 / 23.06	Bell	ProTip	0.18 / 4.57	Acetal / PP
7701049	24	11.60 / 24.96	Bell	ProTip	0.18 / 4.57	Acetal / PP

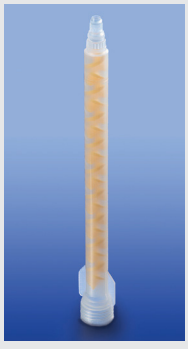
SERIES 163A PROTIP MIXER ACCESSORIES

The Series 163A ProTip™ Mixer Accessory is designed to provide higher speed, increased control, and an easy and cost-efficient way to apply ribbons when applying two-component materials. The polyethylene ProTip easily snaps onto 2K's "A" Series disposable bell housing mixers including 160A and 162A.

Part #	Description	Width	Material	Qty/Bag
7026531	ProTip Mixer Accessory	0.5"	Polyethylene	6
7026533	ProTip Mixer Accessory	1.0"	Polyethylene	6

For use with:

- u-TAH Universal Cartridges
- 380mL Coaxial Cartridges
- 200–1500mL Side x Side Cartridges
- Meter Mix Valves



SERIES 160AA QUICK SPRAY SYSTEMS

Nordson EFD's Series 160AA Quick Spray is a low-pressure air-assisted spray system for two-component coatings. This disposable static mixer is designed for use with conventional meter/mix equipment or with Nordson EFD's two-component cartridge system. The reactive coating is mixed within the disposable static mixer. At the mixer outlet, air is introduced which atomizes the liquid stream. The degree of atomization can be adjusted by regulating the airflow rate. Since the reactive coating is contained completely within the mixer, cleanup is minimal.

Element Diameter 0.366 / 9.30 (in/mm)

Part #	# Mixing Elements	Housing Length (in/cm)	Housing Inlet	Housing Outlet	Element / Housing
7700846	24	7.51 / 19.08	Bell*	Tapered	Acetal / PP
7700920	24	9.89 / 25.12	Bell*	Tapered	Acetal / PP

*Important: For any bell housing inlet mixer, order retaining nut: #7702595 for 0.189-0366" ID; or #7702598 for 0.5" ID

Note: The Series 160AA Quick Spray System also requires these parts:

- Air Cap Assembly (#7701282)
- Quick Connect Fitting (#7701286)

For use with:

- u-TAH Universal Cartridges
- 380mL Coaxial Cartridges
- 200–1500mL Side x Side Cartridges

ROUND SPRAY PATTERN

The round air cap of the Series 160AA produces a full cone pattern, which is completely filled with spray drops. It is used on irregular surfaces, such as truck bed liners.

SERIES 161N HIGH-FLOW INTEGRAL NUT MIXER (SPIRAL)

This mixer is similar to the Series 260, but is constructed of a different material (element is acetal and housing is PP). It has a 7/8 – 9 integral nut.

Element Diameter 0.630 / 16.00 (in/mm)

Part #	# Mixing Elements	Housing Length (in/cm)	Housing Inlet	Housing Outlet	Retained Volume (ml)	Element / Housing
7703903	20	17.26 / 43.84	Integral Nut	Full Bore	58	Acetal / PP

SERIES 162A HIGH-FLOW BELL MIXERS (SPIRAL)

Intended for high-flow rate meter mix applications, this series contains our largest disposable bell mixers: 0.784" in diameter with either 16, 23, 32, 39, 48 or 64 elements. The rugged nylon housing has an oversized bell inlet. The downstream outlet is designed with a 1/2" NPS male thread to attach extensions or other types of accessories.

Element Diameter 0.784 / 19.9 (in/mm)

Part #	# Mixing Elements	Housing Length (in/cm)	Housing Inlet	Housing Outlet	Element / Housing
7701057	16	12.5 / 31.7	Large Bell	ProTip	Acetal / Nylon
7701059	23	17.0 / 43.2	Large Bell	ProTip	Acetal / Nylon
7701063	32	24.5 / 62.2	Large Bell	ProTip	Acetal / Nylon
7701066	39	30.3 / 77.0	Large Bell	ProTip	Acetal / Nylon
7701067	48	36.4 / 92.5	Large Bell	ProTip	Acetal / Nylon
7362603	64	48.5 / 123.2	Large Bell	ProTip	Acetal / Nylon

Disposable Mixers

SERIES 260 MIXERS (SPIRAL)

Series 260 Spiral Mixers are available in Standard Bell and Integral Nut inlet connections. Integral Nut eliminates the need for a separate retaining nut. Options are the Series 260 Spiral Bell Mixer, Series 260 Spiral Barbed Extension Mixer, and Series 260N Spiral Integral Nut Mixer (7/8 - 9).

Part #	# Mixing Elements	Housing Length (in/cm)	Housing Inlet	Housing Outlet	Retained Volume (ml)	Element / Housing
Element Diameter 0.502 / 12.8 (in/mm)						
7701749	12	6.7 / 17.02	Bell	Stepped	15	PP / PP
7701758	18	9.1 / 23.11	Bell	Stepped	19	PP / PP
7701770	24	11.7 / 29.72	Bell	Stepped	25	PP / PP
7701759	18	14.1 / 35.8	Bell	Barb Ext	24	PP / PP
Element Diameter 0.366 / 9.3 (in/mm)						
7701742	5	4.9 / 12.4	Integral Nut	Tapered	7	Acetal / PP
Element Diameter 0.406 - 0.355 / 10.5 - 8.5 (in/mm)						
7701745	12	8.6 / 21.8	Integral Nut	Tapered	12	Acetal / PP
Element Diameter 0.502 / 12.8 (in/mm)						
7701782	18	9.6 / 24.4	Integral Nut	Stepped	19	Acetal / PP
7701795	18	14.4 / 36.5	Integral Nut	Barb Ext	24	Acetal / PP
Element Diameter 0.789 / 20.0 (in/mm)						
7701804	16	12.9 / 32.7	Bell	Full Bore	71	Acetal / PP
7701806	20	15.6 / 39.6	Bell	Full Bore	88	Acetal / PP

For use with:

- u-TAH Universal Cartridges
- 380mL Coaxial Cartridges
- 200–1500mL Side x Side Cartridges

MIXER HOUSING OUTLET TYPES

Full Bore | Stepped | Luer Lok | Slip Luer | H-Tapered | Luer Lok Adapter

Inline Mixers

Nordson EFD offers a wide range of reusable mixers with either metal or plastic elements. Inline mixers typically feature pipe threads on both ends to simplify connection to material lines.

SERIES 140 & 145 PLASTIC MIXERS

This all-plastic assembly is ideal for short pot life adhesives. Its low cost allows disposal of the mixer instead of purging or baking. The housing is translucent, so the operator can inspect the condition of the mixer. With the interior mixing elements molded of acetal, it has the toughness and chemical resistance to be inert to common solvents. Maximum service temperature is 250° F (121° C).

Part #	# Mixing Elements	Housing Ends (mnpt)	Housing Length (in/cm)	Pressure Limit+	Element / Housing
Element Diameter 0.094 / 2.39 (in/mm)					
7700626	30	Plain	3.25 / 8.26	940 / 65	Acetal* / Nylon
Element Diameter 0.125 / 3.18 (in/mm)					
7700632	24	Plain	2.80 / 5.59	580 / 40	Acetal* / Nylon
7700634	30	Plain	3.50 / 8.89	580 / 40	Acetal* / Nylon
7700635	60	Plain	7.00 / 17.78	580 / 40	Acetal* / Nylon
Element Diameter 0.189 / 4.80 (in/mm)					
7700639	24	Plain	4.10 / 10.41	430 / 30	Acetal* / Nylon
7700641	32	Plain	5.40 / 13.72	430 / 30	Acetal* / Nylon
Element Diameter 0.248 / 6.30 (in/mm)					
7700647	24	Plain	6.50 / 16.51	600 / 41	Acetal* / Nylon
7700650	32	Plain	8.50 / 21.59	600 / 41	Acetal* / Nylon
7700653	40	Plain	10.5 / 26.67	600 / 41	Acetal* / Nylon
7700654	48	Plain	12.5 / 21.59	600 / 41	Acetal* / Nylon
7700655	56	Plain	14.5 / 21.59	600 / 41	Acetal* / Nylon
Element Diameter 0.314 / 8.00 (in/mm)					
7700702	12	1/4"	7.10 / 18.03	550 / 38	Acetal* / Nylon**
7700703	18	1/4"	9.10 / 23.11	550 / 38	Acetal* / Nylon**
7700704	24	1/4"	10.70 / 27.18	550 / 38	Acetal* / Nylon**
Element Diameter 0.367 / 9.32 (in/mm)					
7700659	12	Plain	4.4 / 11.18	460 / 32	Acetal* / Nylon
7700661	24	Plain	8.4 / 21.34	460 / 32	Acetal* / Nylon
7700662	30	Plain	10.4 / 26.42	460 / 32	Acetal* / Nylon
7700663	36	Plain	12.4 / 31.50	460 / 32	Acetal* / Nylon
7700664	42	Plain	14.40 / 36.58	460 / 32	Acetal* / Nylon
Element Diameter 0.370 / 9.40 (in/mm)					
7700711	12	1/4"	7.50 / 19.05	460 / 32	Acetal* / Nylon**
7700712	18	1/4"	9.60 / 24.38	460 / 32	Acetal* / Nylon**
7700713	24	1/4"	11.50 / 29.21	460 / 32	Acetal* / Nylon**
7700715	30	1/4"	13.50 / 34.29	460 / 32	Acetal* / Nylon**
Element Diameter 0.497 / 12.62 (in/mm)					
7700737	12	3/8"	8.50 / 21.59	350 / 24	Acetal* / Nylon**
7700738	18	3/8"	11.10 / 28.19	350 / 24	Acetal* / Nylon**
7700739	24	3/8"	13.50 / 34.29	350 / 24	Acetal* / Nylon**
7700741	30	3/8"	16.00 / 40.64	350 / 24	Acetal* / Nylon**

+Pressure limit based on psi@300° F / bar@150° C *Elements are non-removable
**Housing also available in nylon with brass threaded ends

Continued next page

From previous page

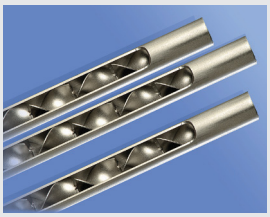
SERIES 140 & 145 PLASTIC MIXERS

Part #	# Mixing Elements	Housing Ends (mnpt)	Housing Length (in/cm)	Pressure Limit+	Element / Housing
Element Diameter 0.630 / 16.00 (in/mm)					
7700754	10	1/2"	9.40 / 23.88	300 / 21	Acetal* / Nylon**
7700755	20	1/2"	14.40 / 36.58	300 / 21	Acetal* / Nylon**
7700757	30	1/2"	19.70 / 50.04	300 / 21	Acetal* / Nylon**
7700760	35	1/2"	22.20 / 56.39	300 / 21	Acetal* / Nylon**
Element Diameter 0.784 / 19.91 (in/mm)					
7700769	8	3/4"	10.00 / 25.40	240 / 17	Acetal* / Nylon**
7700770	16	3/4"	15.10 / 38.35	240 / 17	Acetal* / Nylon**
7700773	24	3/4"	20.40 / 51.82	240 / 17	Acetal* / Nylon**
7700776	32	3/4"	25.60 / 65.02	240 / 17	Acetal* / Nylon**

+Pressure limit based on psi@300° F / bar@150° C *Elements are non-removable
**Housing also available in nylon with brass threaded ends

SERIES 70 HIGH-PRESSURE SPIRAL MIXERS

Designed for high-pressure applications, Series 70 Mixers are available in four diameters and with 21 to 32 elements. A series of left and right hand "edgesealed" spiral elements are nicrobrazed into the length of the tube and cannot be removed. Streamlined contour of the elements ensures the mixer flushes clean with less solvent. Heavy-walled tubing resists warpage during furnace cleaning (maximum furnace temperature should not exceed 1250° F /676° C) and increases the life of the mixer.



Part #	# Mixing Elements	Housing Length (in/cm)	Pressure Limit+	Element / Housing
Element Diameter 0.113 / 2.87 (in/mm)				
7700121	27	7.52 / 19.1	6900 / 476	316 stainless steel* / 304 stainless steel**
Element Diameter 0.187 / 4.75 (in/mm)				
7700125	21	7.00 / 17.78	4200 / 290	316 stainless steel* / 304 stainless steel**
7700126	27	9.25 / 23.50	4200 / 290	316 stainless steel* / 304 stainless steel**
Element Diameter 0.292 / 7.42 (in/mm)				
700133	27	14.00 / 35.56	3600 / 248	316 stainless steel* / 304 stainless steel**
Element Diameter 0.418 / 10.62 (in/mm)				
7700140	24	9.25 / 23.50	2800 / 193	316 stainless steel* / 304 stainless steel**
7700142	32	24.75 / 62.87	2800 / 193	316 stainless steel* / 304 stainless steel**

+Pressure limit based on psi@300° F / bar@150° C *Elements are non-removable
**Housing in 304 stainless steel with plain ends

SERIES 85 HIGH-PRESSURE PIPE MIXERS

Series 85 Pipe Mixers are designed for high-pressure applications and feature sturdy metal housings with Series 120 disposable plastic mixing elements. The housing is made from heavy-walled stainless steel pipe that resists dents and distortions. For routine maintenance, the mixer can be pushed out and replaced.

Part #	# Mixing Elements	Housing Ends (mnpt)	Housing Length (in/cm)	Pressure Limit+	Element / Housing
Element Diameter 0.366 / 9.30 (in/mm)					
7700180	12	1/4"	4.20 / 10.67	8500 / 585	Acetal* / 304 stainless steel
7700181	18	1/4"	6.20 / 15.75	8500 / 585	Acetal* / 304 stainless steel
7700182	24	1/4"	8.20 / 20.83	8500 / 585	Acetal* / 304 stainless steel
7700183	30	1/4"	10.00 / 25.40	8500 / 585	Acetal* / 304 stainless steel
Element Diameter 0.497 / 12.62 (in/mm)					
7700193	24	3/8"	10.70 / 27.18	7250 / 500	Acetal* / 304 stainless steel
7700195	30	3/8"	13.12 / 33.32	7250 / 500	Acetal* / 304 stainless steel
Element Diameter 0.630 / 16.00 (in/mm)					
7700199	30	1/2"	16.40 / 41.66	7250 / 500	Acetal* / 304 stainless steel
Element Diameter 0.784 / 19.91 (in/mm)					
7700205	24	3/4"	16.40 / 41.66	6000 / 415	Acetal* / 304 stainless steel
7700206	32	3/4"	21.70 / 55.12	6000 / 415	Acetal* / 304 stainless steel

+Pressure limit based on psi@300° F / bar@150° C
*Elements are removable.
Select from Series 120 mixer elements below for replacement parts.

SERIES 120 PLASTIC SPIRAL MIXER ELEMENTS

The Series 120 plastic spiral elements have an “apple core” cross section. Elements are injection-molded in one operation ensuring excellent quality control and low unit cost. Benefits include long life and great flow rate, plus element flushes clean with less solvent.

Part #	# Mixing Elements	Element Diameter (in/mm)	Element Length (in/cm)	Element*
7700465	12	0.093 / 2.36	1.16 / 2.95	Acetal
7700459	12	0.125 / 3.18	1.30 / 3.30	Acetal
7700469	14	0.189 / 4.80	2.23 / 5.66	Acetal
7700470	16	0.191 / 4.85	2.56 / 6.50	Acetal
7700166	7	0.212 / 5.38	1.48 / 3.76	Acetal
7700478	21	0.212 / 5.38	4.45 / 11.30	Acetal
7700475	8	0.248 / 6.30	2.00 / 5.08	Acetal
7700480	12	0.248 / 6.30	3.00 / 7.62	Acetal
7700481	16	0.251 / 6.38	3.96 / 10.06	Acetal
7700486	20	0.248 / 6.30	5.00 / 12.70	Acetal
7700489	24	0.248 / 6.30	5.94 / 15.09	Acetal
7700507	12	0.314 / 8.00	3.67 / 9.32	Acetal
7700498	6	0.367 / 9.32	2.00 / 5.08	Acetal
7700500	12	0.370 / 9.40	3.90 / 9.91	Acetal
7700509	24	0.370 / 9.40	7.83 / 19.89	Acetal
7700515	12	0.497 / 12.62	5.00 / 12.70	Acetal
7700519	18	0.497 / 12.62	7.47 / 18.98	Acetal
7700523	10	0.630 / 16.00	5.42 / 13.77	Acetal
7700526	8	0.790 / 20.07	5.42 / 13.77	Acetal
7700528	4	1.025 / 26.04	5.90 / 14.99	Acetal

*PP available in select sizes. Contact EFD for recommendations.

SERIES 100 INLINE MIXERS

Rugged and reliable, the Series 100 Mixers are all stainless steel and feature a modular design so you can remove the elements for easy cleaning. Two or more mixers can be coupled together using a pipe connector. Streamlined contour of the elements ensures the mixer flushes clean with less solvent. Heavy-walled tubing resists warpage during furnace cleaning (maximum furnace temperature should not exceed 1250° F /676° C) and increases the life of the mixer.

Part #	# Mixing Elements	Housing Ends (mnpt)	Housing Length (in/cm)	Pressure Limit+	Element / Housing
Element Diameter 0.267 / 6.78 (in/mm)					
7700364	12	1/8"	5.38 / 13.67	8750 / 600	316 stainless steel* / 304 stainless steel
Element Diameter 0.363 / 9.22 (in/mm)					
7700366	6	1/4"	3.75 / 9.53	8500 / 585	316 stainless steel* / 304 stainless steel
7700367	12	1/4"	7.00 / 17.78	8500 / 585	316 stainless steel* / 304 stainless steel
Element Diameter 0.494 / 12.55 (in/mm)					
7700370	12	3/8"	9.50 / 24.13	7250 / 500	316 stainless steel* / 304 stainless steel
Element Diameter 0.623 / 15.83 (in/mm)					
7700372	6	1/2"	5.75 / 14.61	7250 / 500	316 stainless steel* / 304 stainless steel
7700373	12	1/2"	11.00 / 27.94	7250 / 500	316 stainless steel* / 304 stainless steel
Element Diameter 0.779 / 19.79 (in/mm)					
7700377	12	3/4"	14.75 / 37.47	6000 / 415	316 stainless steel* / 304 stainless steel
Element Diameter 1.032 / 26.21 (in/mm)					
7700381	6	1"	9.50 / 24.13	4500 / 310	316 stainless steel* / 304 stainless steel
7700384	12	1"	18.50 / 46.99	4500 / 310	316 stainless steel* / 304 stainless steel
Element Diameter 1.580 / 40.13 (in/mm)					
7700391	6	1-1/2"	14.00 / 35.56	3000 / 207	316 stainless steel* / 304 stainless steel
Element Diameter 2.035 / 51.69 (in/mm)					
7700395	6	2"	17.50 / 44.45	2500 / 170	316 stainless steel* / 304 stainless steel

+Pressure limit based on psi@300° F / bar@150° C *Elements are removable.
Contact EFD for replacement part recommendations.

PU FOAM (FFR) MIXERS

Foam Froth Remover (FFR) mixers are intended for urethane foam applications. The extended tube serves two purposes: (1) for reach, and (2) to reduce the spiraling of material after the elements to allow for a more accurate dispense.

Part #	# Mixing Elements	Flow Rate (PPM)	Housing Length (in/cm)	Element / Housing
Element Diameter 0.50 / 12.70 (in/mm)				
7701023	24	15	13.2 / 33.53	Acetal / PP
Element Diameter 0.64 / 16.23 (in/mm)				
7700679	10	30	40.0 / 101.60	Acetal / Nylon
7700682	20	30	24.0 / 60.96	Acetal / Nylon
7701712	10	30	15.0 / 38.10	PP / Nylon
Element Diameter 0.79 / 20.07 (in/mm)				
7700688	12	60	25.0 / 63.50	Acetal / Nylon
7700690	16	60	28.0 / 71.12	Acetal / Nylon
7700692	16	60	40.0 / 101.60	Acetal / Nylon

For use with:

Meter Mix Valves

Meter Mix Valves

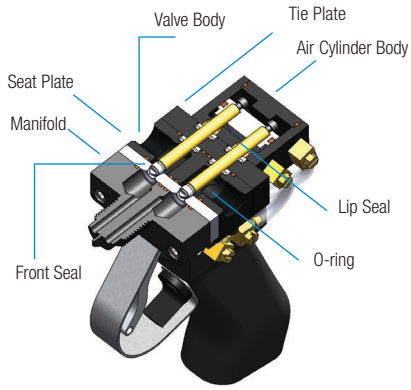
Nordson EFD provides a complete line of modular metal valves that can be easily disassembled and cleaned after mixing. Maintaining valves that handle reactive resins can be time-consuming and expensive — a plugged valve translates to lost production, and even a partially plugged mixer results in poor quality.

Features and Benefits

- Eliminate solvent flushing
- Less adhesive waste
- Cleans up easily for increased productivity

ORDERING GUIDE

- Valve, manifold, and handle are ordered individually
- For high back pressure conditions (i.e. over 1000 psi/69 bar) order a double air cylinder
- Seal Designations: T=PTFE, P=Polyurethane, V=Viton, G=Polytuff



Series 400 Autovalve

Recommended Mixer:

Series 160 Mixer

With meter mix and dispense systems, the pneumatic Series 400 Autovalve is a durable and reliable valve. The A and B shut off pistons have PTFE seals allowing high flow with minimal maintenance as these seals can be adjusted without disassembly of the valve body. The 9/16-18 fluid inlet ports of the Series 400 Autovalve allows flow rates of 3-4 gallons per minute, depending on pump capability and material viscosity.

7701895 400 Autovalve
Aluminum Valve, Single Air Cylinder, TPV Seals

7701908 400 Autovalve
Aluminum Valve, Double Air Cylinder, TPV Seals

7702095 400 Autovalve
Stainless Steel Valve, Single Air Cylinder, TGT Seals

Order handle separately; see Autovalve Accessories for details.

Specifications 400/400HF/450

Valve

Size: 83.8L x 63.5W x 58.4H mm (3.3" x 2.5" x 2.3")

Body Material: 6061-T6 Aluminum or 303 Stainless Steel

O-ring Options*: Viton, PTFE, Ethylene-Propylene (E-P)

Lip Seal Options*: Viton, Polyurethane (PU), PTFE, Polytuff, Ethylene-Propylene (E-P)

* Repair kits containing a complete set of lip seals and O-rings are available.

Manifold

Size: 48.3L x 63.5W x 38.1H mm (1.9" x 2.5" x 1.5")

Material: 6061-T6 Aluminum or 303 Stainless Steel

Outlet Thread Size Options: 7/8"-14 (for standard bell mixers); 1 5/16"-12 (for oversized bell mixers)

Valve System

Weight: Aluminum Valve and Manifold: 1.6 lb (0.7 kg) Stainless Steel Valve and Manifold: 2.5 lb (1.1 kg)

Operating Parameters: Min. Operating Pressure: 80 psi (5.5 bar) Max. Fluid Pressure: 3500 psi (240 bar)

Electric Handle Mount Switch: 24V

MANIFOLDS FOR SERIES 400 AUTOVALVES

Ratio	Part # (Manifold)	Part # (Manifold with solvent port)	Material	Flow
1:1	7701933	7701935	Aluminum	Low Flow
Wide	7701938	7701940	Aluminum	Low Flow
1:1	7701942	7701943	Aluminum	High Flow
Wide	7701946	7701949	Aluminum	High Flow
1:1	7702109	7702110	Stainless Steel	High Flow

The 400HF Valve provides flow rates that are 15-30% greater than the standard 400 Valve configuration, without compromising accuracy or consistency. The large 3/4" material inlet ports permit flow rates of 4-5 gallons per minute, depending on pump capability and material viscosity.

MANIFOLDS FOR SERIES 400HF AUTOVALVES				
Ratio	Part # (Manifold)	Part # (Manifold with solvent port)	Material	Flow
1:1	7701953	7701954	Aluminum	Ultra High
1:1	7704020	7704021	Stainless Steel	Ultra High

Series 400HF Autovalve

Recommended Mixer:

Series 162A Mixer

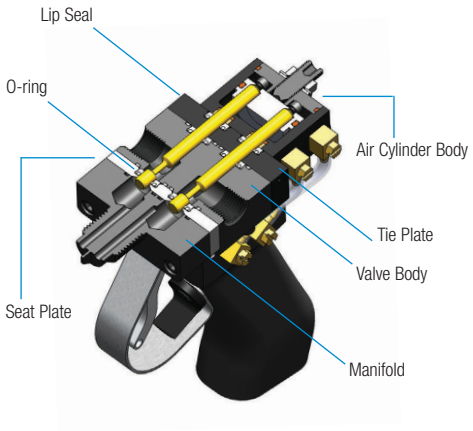
Specifications
See Series 400, previous page

7704105 400HF Autovalve
Aluminum Valve, Single Air Cylinder, TGT Seals

7701924 400HF Autovalve
Aluminum Valve, Single Air Cylinder, TPV Seals

7704019 400HF Autovalve
Stainless Steel Valve, Single Air Cylinder, TPV Seals

Order handle separately; see Autovalve Accessories for details.



The pneumatic Series 450 Autovalve is similar to the Series 400 Autovalve, except for the shut-off pistons which ensure good control of dot or shot volume. After each shot, the dual pistons retract and “snuff back” material from the end of the mixing nozzle. This feature helps eliminate “after drool.” This valve includes hard-coated and lubricated pistons. It can be used either as a stationary head or hand-held unit. In addition, seals can be adjusted without disassembly of the valve body.

MANIFOLDS FOR SERIES 450 / 450RC / 450XT AUTOVALVES				
Ratio	Part # (Manifold)	Part # (Manifold with solvent port)	Material	Flow
1:1	7701933	7701935	Aluminum	Low Flow
Wide	7701938	7701940	Aluminum	Low Flow
1:1	7701942	7701943	Aluminum	High Flow
Wide	7701946	7701949	Aluminum	High Flow
1:1	7702109	7702110	Stainless Steel	High Flow

Series 450 Autovalve

Recommended Mixer:

Series 160 Mixer

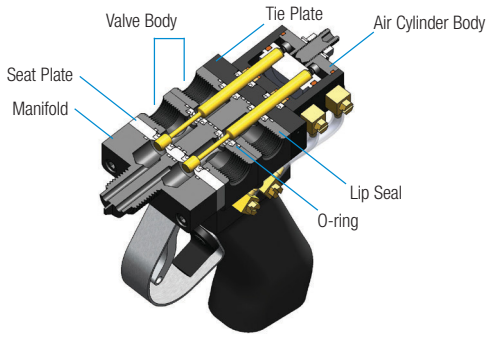
Specifications
See Series 400, previous page

7702201 450 Autovalve
Aluminum Valve, Single Air Cylinder w/Snuff Back, GT Seals

7702209 450 Autovalve
Aluminum Valve, Single Air Cylinder w/Snuff Back, PV Seals

7702443 450 Autovalve
Stainless Steel Valve, Single Air Cylinder w/Snuff Back, GT Seals

Order handle separately; see Autovalve Accessories for details.



Series 450RC Recirculating Autovalve

Recommended Mixer:

Series 160 Mixer

Manifolds:
See Series 450 Manifold Table, previous page

The 450RC Autovalve allows continuous flow of material while still being able to control shut-off at the mixer. Typical uses are for heated materials or materials with fillers that need to remain suspended. Gear pump applications can also benefit because pumps can be kept running while material is shut off at the mixer.

Recirculation occurring at the valve instead of the pump eliminates pressure buildup in the lines, preventing off-ratio dispensing. The valve also incorporates a snuff-back feature that minimizes or eliminates the possibility of material dripping or stringing when the valve shuts off.

7702217 450RC Autovalve
Aluminum Valve, Single Air Cylinder w/ Snuff Back, GT Seals

7703848 450RC Autovalve
Stainless Steel Valve, Single Air Cylinder w/ Snuff Back, GT Seals

Order handle separately; see Autovalve Accessories for details.

Specifications

Valve

Size: 132L x 63.5W x 58.4H mm (3.3 x 2.5 x 2.3")

Body Material: 6061-T6 Aluminum or 303 Stainless Steel

O-ring Options*: Viton, PTFE Ethylene-Propylene (E-P)

Lip Seal Options*: Viton, Polyurethane (PU), PTFE, Polytuff, Ethylene-Propylene (E-P)

* Repair kits containing a complete set of lip seals and O-rings are available.

Manifold

Size: 48.3L x 63.5W x 38.1H mm (1.9" x 2.5" x 1.5")

Material: 6061-T6 Aluminum or 303 Stainless Steel

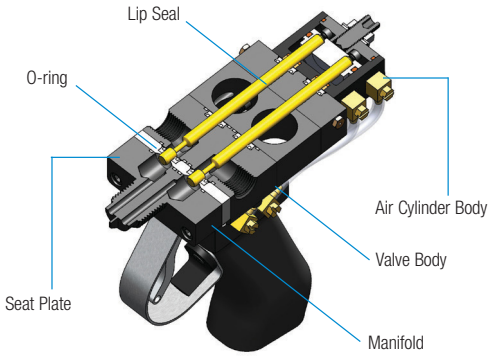
Outlet Thread Size Options:
7/8"-14 (for standard bell mixers)

Valve System

Weight:
Aluminum Valve and Manifold: 2.0 lb (0.9 kg)
Stainless Steel Valve and Manifold: 3.4 lb (1.5 kg)

Operating Parameters:
Min. Operating Pressure: 80 psi (5.5 bar)
Max. Fluid Pressure: 3500 psi (240 bar)

Electric Handle Mount Switch: 24V



Series 450XT Snuff Back Valve

Recommended Mixer:

Series 160 Mixer

Manifolds:
See Series 450 Manifold Table, previous page

This innovative dispense valve is designed specifically for two-component urethanes and eliminates exposure of wetted shafts to air. Since 2K urethanes are moisture sensitive, any contact with air can cure the material, locking up the dispense valve.

7702216 450XT Autovalve
Aluminum Valve, Extended Air Cylinder with Snuff Back and GT Seals

7702447 450XT Autovalve
Stainless Steel Valve, Extended Air Cylinder with Snuff Back and GT Seals

Order handle separately; see Autovalve Accessories for details.

Specifications

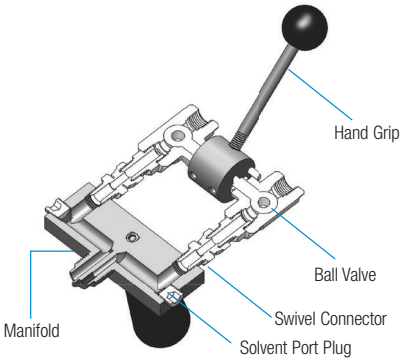
Weight:
Aluminum Valve and Manifold: 1.6 lb (0.7 kg)
Stainless Steel Valve and Manifold: 2.5 lb (1.1 kg)

Pressure Rating: 3500 psi (240 bar)

Accessories

Polytuff, PTFE, Viton, and EP Seals:
For varying chemical formulations and abrasive conditions

Optional Night Cap & Ratio Check Cap:
Available for 1:1 ratio manifolds



Series 550LP & 560HP Manual Valve

Recommended Mixer:

Series 160 Mixer

Manifold Options for Manual Valves

Low Flow LF | High Flow HF | Wide Ratio

The inexpensive Series 550LP and 560HP Valves are intended for low-pressure and high-pressure meter mix applications, respectively. These manual valves are ideal for dispensing beads or RTM casting. The design is simple: two ball valves are threaded into the back of the manifold and are connected to a common lever so that both valves open and close at the same time. (The 550LP Valve is not intended for "feathering" or otherwise attempting to meter the flow.)

Specifications

Material Inlet: 1/4" FNPT

Weight:
- 550 Valve: 2.5 lb (1.1 kg)
- 560 Valve: 3.6 lb (1.6 kg)

Pressure Rating:
- 550 Valve: 600 psi (41 bar)
- 560 Valve: 1500 psi (103 bar)

Wetted parts:
- 550 Valve: Brass, Aluminum, and Carbon Steel
- 560 Valve: 303 Stainless Steel

ACCESSORIES	
Part #	Description
7702492	Brass Solvent Flush Check Valve
7702494	Stainless Steel Solvent Flush Check Valve
7701184	Ratio Check Cap
7701181	Night Cap

7702508 Manual Valve
550LP Valve, Wide Ratio Manifold, Brass / Aluminum / CS

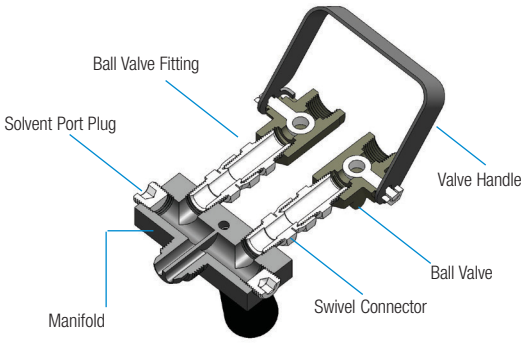
7702511 Manual Valve
550LP Valve, High Flow Manifold, Brass / Aluminum / CS

7702515 Manual Valve
550LP Valve, Low Flow Manifold, Brass / Aluminum / CS

7702546 Manual Valve
560HP Valve, Wide Ratio Manifold, Stainless Steel

7702547 Manual Valve
560HP Valve, High Flow Manifold, Stainless Steel

7702548 Manual Valve
560HP Valve, Low Flow Manifold, Stainless Steel



Series 600 High Flow Manual Valve

Recommended Mixer:

Series 162A Mixer

The Series 600 "MEGA" Valve was specifically designed to be used with the 2K 162A Series disposable 3/4" diameter static mixer. The "MEGA" 600 allows the user to handle both high flow and high viscosity materials easily.

The A & B components are separately ported through the valve body and do not combine until they meet inside the static mixer.

Specifications

Material Inlet: 1/2" FNPT

Maximum Working Pressure: 600 psi (40 bar)

ACCESSORIES	
Part #	Description
7026515	Retaining Nut
7702583	Solvent Flush Check Valve

7702569 Manual Valve
High Flow Valve Assembly

7702571 Manual Valve
High Flow Valve Assembly, Wide Ratio Manifold

CARBON STEEL PIPE ADAPTERS

Part	Part #	Description
	7702407	90° Elbow w/1/4" FNPS
	7702414	90° Elbow w/1/4" MNPT
	7702416	Straight Adapter w/1/4" FNPS
	7702419	Straight Adapter w/1/4" MNPT
	7702420	90° Elbow w/3/8" FNPS
	7702424	90° Elbow w/3/8" MNPT
	7702425	Straight Adapter w/3/8" FNPS
	7702428	Straight Adapter w/3/8" MNPT
	7702429	2K V-Parts CS H-Adpt Elbow 1/2" FNPT

CARBON STEEL 37° JIC ADAPTERS

Part	Part #	Description
	7702411	90° Elbow w/1/4" Male JIC
	7702417	Straight Adapter w/1/4" Male JIC
	7702421	90° Elbow w/3/8" Male JIC
	7702426	Straight Adapter w/3/8" Male JIC

SWIVEL CHECK VALVE ADAPTERS

Part	Part #	Description
	7702408	SS w/Alum. Collar, 1/4" FNPT
	7702409	All SS, 1/4" FNPT

316 STAINLESS STEEL 37° JIC ADAPTERS

Part	Part #	Description
	7702413	Elbow w/1/4" Male JIC
	7702418	Straight Adapter w/1/4" Male JIC
	7702423	90° Elbow w/3/8" Male JIC
	7702427	Straight Adapter w/3/8" Male JIC

TRIGGER HANDLES

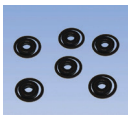
If using an electric handle, a solenoid from an outside vendor is required.
Elbow adapters are available to connect material lines to the valve.

Part	Part #	Description
	7701971	Pistol Grip Handle w/Electric Momentary Switch (24V)
	7701973	Pistol Grip Handle w/Electric Push On/Off Switch (24V)
	7701977	Pistol Grip Handle w/Pneumatic Switch

RATIO CHECK CAP AND NIGHT CAP

Part	Part #	Description
	7701181	PTFE Night Cap & Nut
	7701184	PTFE Ratio Check Cap & Nut

REPAIR KITS

Part	Part #	Description
	7704092	2K Kit 4X0 Repair TFV
	7704093	2K Kit 4X0 Repair TGT
	7704094	2K Kit 4X0 Repair TGV
	7704095	2K Kit 4X0 Repair TPV
	7704096	2K Kit 4X0 Repair TTT

VALVE SEALS

EFD offers a wide variety of seal configurations for Series 400/450 autovalves. Select both the O-ring and U-cup seals based on chemical compatibility.

Part	Part #	Material	Color	Description
			O-rings	
	7702275	PTFE	Orange	Recommended with all chemicals
	7702810	EP	Black	MEK, ketones, and acetones
	7702813	Viton	Brown	Methylene chloride, alcohol, and carbon tetrachloride
			U-cups	
	7702280	PTFE	Aqua	With PTFE O-ring / Recommended with all chemicals
	7702277	UHPME	Clear	With SS spring / Epoxies (amine catalyst), polyesters, and acrylics
	7702281	PU	Orange	With Viton O-ring / Epoxies (general), polyurethanes, and polysulfides

BLOCK MANIFOLDS FOR MIXERS

Nordson EFD's two-component manifolds separately port the resin and hardener into the mixing nozzle. Cleanup simply involves wiping the manifold face after the nozzle has been removed. To prevent back flow or cross contamination of reactive material, inline check valves are available. Designed when you're dispensing without a meter mix valve, but directly through the mixer. For use with Series 160 and 162A.

Part	Part #	Material	Inlet	Outlet	Solvent Ports	Mixer
	7701323	Aluminum	(2) 1/8" FNPT	7/8 - 14	1/4" FNPT	Series 160
	7701324	Aluminum	(2) 1/4" FNPT	7/8 - 14	–	Series 160
	7701325	Aluminum	(2) 1/4" FNPT	7/8 - 14	1/4" FNPT	Series 160
	7701326	Aluminum Hand-Held	(2) 1/8" FNPT	7/8 - 14	–	Series 160
	7701328	Aluminum	(2) 1/2" FNPT	1-5/16 - 12 UN	–	Series 162A
	7701329	Aluminum	(2) 1/2" FNPT	1-5/16 - 12 UN	1/4" FNPT	Series 162A

ADAPTERS FOR MIXERS

Mixers can be connected to some pre-existing manifolds or valves using adapters. Contact Nordson EFD for details. For use with Series 85, 100, 160, and 162A.

Part	Part #	Material	Inlet
	7701250	Carbon Steel	1/2" Female NPT
	7701252	Carbon Steel	11/16" Female NPT (for Venus Gun)
	7701254	Carbon Steel	1/4" Male NPT
	7701256	Carbon Steel	3/8" Male NPT
	7701258	Carbon Steel	1/2" Male NPT
	7701261	Carbon Steel	3/4" Male NPT
	7701310	Aluminum	7/8" - 14 Female NPT (for 2K Valves)
	7701311	Carbon Steel	1/2" Male NPT
	7701313	Carbon Steel	3/4" Male NPT
	7701315	Carbon Steel	1" Male NPT

DISPENSING TIPS FOR MIXERS

Luer Lok adapters (locking hubs) are used for attaching Optimum dispensing tips to Series 190 and 160 mixers. If you want to use a metal jacket with the 3.16" ID or 1/4" ID bell mixers, order the mixer and the Luer Lok fitting as two separate items unassembled: square hub outlet and #7700943 Luer Lok fitting (bag of 50). See Optimum Dispensing Tips for details.

RETAINING NUTS FOR MIXERS & METER MIX VALVES

Available to hold mixing nozzles onto adapters, block manifolds, and meter mix valves. Also used when a metal jacket is not required.

Part	Part #	Material	Thread	Mixer
	7701110	Aluminum	2K Standard 7/8 - 14	Series 160 with ID 0.189-0.248"
	7701112	Aluminum	Alternative 7/8 - 9	Series 160 with ID 0.189-0.248"
	7701113	Aluminum	2K Standard 7/8 - 14	Series 160 with ID 0.314-0.497"
	7701114	Aluminum	Alternative 7/8 - 9	Series 160 with ID 0.314-0.497"
	7701115	Aluminum	2K Standard 7/8 - 14	Series 141 & Series 161 (all)
	7701116	Aluminum	Alternative 7/8 - 9	Series 161 (all)
	7701108	Aluminum	1-1/16 - 12	Series 141 (all)
	7026515	Carbon Steel	1-5/16 - 12 UNF	Series 162A (all)
	7701132	Aluminum	1-1/4 - 12 NS	Series 141 (all)
	7701118	Aluminum	2K Standard 7/8 - 14	Series 141 (all)

ONE-PIECE METAL JACKETS FOR MIXERS ON METER MIX VALVES

For medium- and high-pressure systems where pressure inside the mixer is greater than 150 psi (10 bar), we recommend that a metal jacket be used over the mixing nozzle. Select Robotic version where repeat positioning is required.

Part	Part #	Material	Thread	Mixer Part #	Mixer
	7701124	Aluminum, Robotic	2K Standard 7/8 - 14	7700837	Series 160
	7701135	Aluminum	Alternative 7/8 - 9	7700831	Series 160
	7701138	Aluminum, Robotic	2K Standard 7/8 - 14	7700819	Series 160
	7701140	Aluminum	2K Standard 7/8 - 14	7700819	Series 160
	7701141	Aluminum	Alternative 7/8 - 9	7700837	Series 160
	7701143	Aluminum	2K Standard 7/8 - 14	7700856	Series 160
	7701147	Aluminum	2K Standard 7/8 - 14	7700866	Series 160
	7701155	Aluminum	Alternative 7/8 - 9	7700876	Series 160
	7701163	Aluminum	Alternative 7/8 - 9	7013510	Series 160
	7701167	Aluminum	2K Standard 7/8 - 14	7700904	Series 160
	7701165	Aluminum, Robotic	2K Standard 7/8 - 14	7700904	Series 160
	7701171	Aluminum	2K Standard 7/8 - 14	7700927	Series 160
	7701170	Aluminum, Robotic	2K Standard 7/8 - 14	7700927	Series 160
	7701174	Aluminum	2K Standard 7/8 - 14	7700932	Series 160
	7701186	Aluminum, Robotic	2K Standard 7/8 - 14	7700960	Series 160
	7701191	Aluminum, Robotic	Alternative 7/8 - 9	7700969	Series 160
	7701193	Aluminum	Alternative 7/8 - 9	7700969	Series 160
	7701203	ACS Nut / SS Jacket	2K Standard 7/8 - 14	7701010, 7701049	Series 160
	7701208	Aluminum, Robotic	2K Standard 7/8 - 14	7701010, 7701049	Series 160
	7701210	CS Nut / SS Jacket	2K Standard 7/8 - 14	7701028	Series 160
	7701216	CS Nut / SS Jacket	2K Standard 7/8 - 14	7701038	Series 160
	7701396	Aluminum, Robotic	2K Standard 7/8 - 14	7361695	Series 480
	7701397	Aluminum, Robotic	Alternative 7/8 - 9	7361695	Series 480
	7701225	CS Nut/SS Jacket	1-5/16 - 12	7701057	Series 162A
	7701226	CS Nut/SS Jacket	1-5/16 - 12	7701059	Series 162A
	7701227	CS Nut/SS Jacket	1-5/16 - 12	7701063	Series 162A

Useful Resources

Choosing and implementing the best possible fluid dispensing equipment starts with access to the best possible resources. Here are some to get you started:

Application Videos

Visit our Video Gallery to access 150+ application, how-to, and product videos. See EFD dispensing solutions in action.

Watch Videos: www.nordsonefd.com/VideoGallery

What Our Customers Say

Find out how Nordson EFD helps manufacturers improve their fluid dispensing processes every day — see what our customers have to say.

Our Customers Know Best: www.nordsonefd.com/Testimonials

Expert Recommendations

Knowledgeable Nordson EFD fluid application specialists have, on average, more than 10 years of experience helping customers find the right dispensing solutions.

Request Expert Advice: www.nordsonefd.com/Advice

Request Lab Test: www.nordsonefd.com/ApplicationTest

Follow our Blog: www.nordsonefd.com/Blog

Easy Part Number Search

It's easy to search our digital catalog to find products by part number or keywords. Plus, get links to product specs, videos, and more. With our app, you can even access the catalog from your smartphone.

Find Part Numbers: www.nordsonefd.com/Digital-Catalog

Machine Builder Guide & CAD Models

When you partner with Nordson EFD, you benefit from a wide range of reliable, best-in-class precision fluid dispensing solutions.

Learn more: www.nordsonefd.com/MachineBuilderGuide

Download CAD models: www.nordsonefd.com/CAD

Dot Volumes

Volume = D^3 x 0.5236 ÷ 2*
(* 1/2 the volume of a sphere)

Volume of Dots

dot	mm	inches	V cc
•	0.5	0.02	0.00003
•	0.8	0.03	0.0001
•	1.0	0.04	0.0003
•	1.3	0.05	0.0005
•	1.8	0.07	0.001
•	2.3	0.09	0.003
•	2.8	0.11	0.006
•	3.3	0.13	0.009
•	3.8	0.15	0.014
•	4.3	0.17	0.021
•	4.8	0.19	0.029
•	5.6	0.22	0.046
•	6.1	0.24	0.059
•	6.6	0.26	0.075

Volume of Dots

dot	mm	inches	V cc
•	7.6	0.30	0.116
•	8.9	0.35	0.184
•	10.2	0.40	0.275
•	11.4	0.45	0.391
•	12.7	0.50	0.536
•	19.1	0.75	1.810

Bead Volumes

Volume of Beads

Bead diameter		Volume per linear inch	
mm	inches	cubic inch	cc's
1.6	0.06	0.0031	0.050
2.4	0.09	0.0069	0.113
3.2	0.12	0.0123	0.201
4.8	0.19	0.0276	0.453

Volumes and Conversions

Volume

1 fluid ounce	= 29.57 cubic centimeters
1 gallon	= 3785 cubic centimeters
1 gallon	= 3.785 liters
1 gallon	= 128 fluid ounces
1 gallon	= 4 quarts
1 gallon	= 8 pints
1 gallon	= 16 cups
1 gallon	= 231 cubic inches
1 gallon	= 0.134 cubic feet
1 liter	= 0.264 gallons
1 liter	= 1.06 quarts
1 liter	= 1000 milliliters
1 cubic foot	= 1728 cubic inches
1 cubic foot	= 7.48 gallons
1 cubic inch	= 16.387 cubic centimeters
1 cubic centimeter	= 1 milliliter
1 microliter	= 0.001 cc's
1 microliter	= 1000 nanoliters
1 nanoliter	= 0.000001 cc's
1 nanoliter	= 1000 picoliters

Weight

1 kilogram	= 1000 grams
1 kilogram	= 2.2 pounds
1 pound	= 16 ounces
1 pound	= 453.6 grams
1 pound	= 7000 grains
1 ounce	= 28.35 grams

Length

1 micron	= .0000394 inches
1 micron	= 0.001 millimeters
1 centimeter	= 10 millimeters
1 centimeter	= 10,000 microns
1 inch	= 2.54 centimeters
1 inch	= 25.4 millimeters
1 inch	= 25,400 microns
1 foot	= 30.48 centimeters
1 yard	= 91.44 centimeters
1 mile	= 5280 feet
1 mile	= 1.6 kilometers

Pressure

1 psi	= 0.069 bar
1 psi	= 0.070 kgf/cm^2
1 psi	= 6894.8 Pa
1 psi	= 27.680 in H_2O@4° C

Fluid Viscosities

Dispensing conditions are driven by many factors. When selecting the correct system for your application, the material's properties, including viscosity and deposit size, are important considerations.

Viscosity is the measurement of a fluid's internal resistance to flow. This is usually designated in units of centipoise or poise, but can be expressed in other measurements as well. Refer to the chart below.

APPROXIMATE VISCOSITIES OF COMMON MATERIALS (at room temperature — 21° C (70° F)	
Material	**Viscosity in Centipoise**
Water	1 — 5
Kerosene	10
Anti-freeze or Ethylene Glycol	15
Motor Oil SAE10	50 — 100
Motor Oil SAE30 or Maple Syrup	150 — 200
Motor Oil SAE40 or Castor Oil	250 — 500
Motor Oil SAE60 or Glycerin	1,000 — 2,000
Corn Syrup or Honey	2,000 — 3,000
Molasses	5,000 — 10,000
Chocolate Syrup	10,000 — 25,000
Ketchup or Mustard	50,000 — 70,000
Tomato Paste or Peanut Butter	150,000 — 250,000
Shortening or Lard	1,000,000 — 2,000,000
Caulking Compound	5,000,000 — 10,000,000
Window Putty	100,000,000

Typical Assembly Materials Dispensed with EFD Systems

- Activators
- Anaerobics
- Coatings
- Cyanoacrylates
- Electrolytes
- Epoxies
- Fluxes
- Gels
- Greases
- Lubricants
- Oils
- Marking Inks
- RTV/Sealants
- Solder Pastes
- Solvents
- UV-Cure & Light-Cure
- White Glues

Conversion Factors

100 Centipoise	=	1 Poise
1 Centipoise	=	1 mPa•s (Millipascal Second)
1 Poise	=	0.1 Pa•s (Pascal Second)
Centipoise	=	Centistoke x Density

"We ordered supplies yesterday and 17 hours later, they arrived! 2 years and never a problem of any kind. Thanks."

– Progressive Mfg. Co.

Notes

EFD Mission

Provide best-in-class fluid management solutions, built on EFD's continued investment in applications knowledge, innovative products, operational excellence, superior customer service, and a lasting commitment to quality.

and Vision

Be the global leader in providing our customers premium fluid management solutions for low-volume precision dispensing markets.

World Leader in Precision Fluid Dispensing

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.

Here are just a few things our customers have to say about working with us:

"We're producing better-looking parts in half the time."
– ECM Motor Co.

"Our product is critical. That's why our choice is EFD equipment."
– Ethicon Endo Surgery

"Your system has several benefits compared to what we used before. We're talking about 75% less consumption [of oil]."
– Gestamp Aveiro

"The quality of their product, as well as their knowledge and support, have been nothing short of excellent."
– Lorik Tool & Automation Inc.

"Better control means over $50,000 in fluid savings annually."
– Mitsubishi

"It's not complicated. You set it up and it works."
– Texas Instruments

"Applications support from Nordson EFD has been exceptional. They are quick to respond & give us the information needed."
– Preh Ima Automation

"The quality of the packages that we put our products in matters. That's why we use EFD syringes and cartridges."
– Dymax

Nordson EFD

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