

# Precision Dispensing Systems



# Ultimus™ High Precision Dispensers



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.



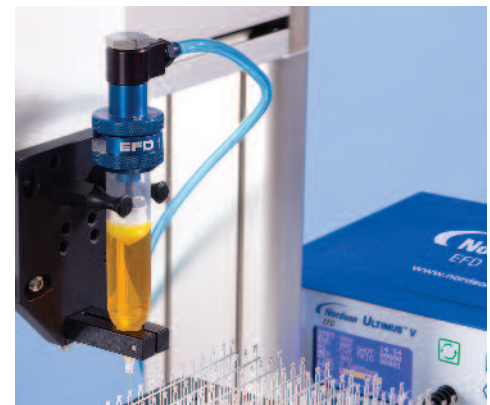
## Ultimus V

The Ultimus V High Precision Dispenser provides a new 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.

- 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

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

7012589 Ultimus V  
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).



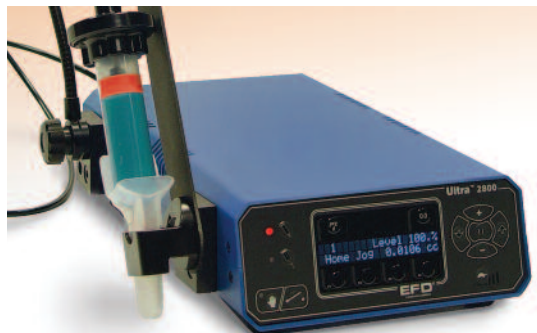
Specifically designed to work with the Ultimus V, the patent-pending Optimeter™ provides even greater control when dispensing all fluids by automatically increasing airflow as the syringe barrel empties.

# Ultimus High Precision 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.



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

## Ultimus I, II and III

Featuring simultaneous digital display of all dispenser settings and time adjustment as fine as .0001 seconds, Ultimus dispensers bring exceptional process control to medical device, electronics and other critical dispensing processes.



7017041 Ultimus I  
(2400)  
Features a 0-100 psi (0-7 bar) pressure regulator that handles all fluids.

7002003 Ultimus II  
(2415)  
Has a 0-15 psi (0-1 bar) regulator that provides greater control when dispensing thin fluids.

7017068 Ultimus III  
(2405)  
Uses a 0-5 psi (0-0.35 bar) regulator for dispensing micro-deposits of solvents and other very thin fluids.

ULTIMUS MODELS AND FEATURES

Features	Dispense Time Display	Air Pressure Display	Adjustability			Modes of Operation				Time Range		Air Pressure Range			Input/Output	Universal Voltage
			Time	Air	Vac	Steady	Timed	Volumetric	Teach	0-999.9 sec.	0-9.9999 sec.	0-100 psi (0-7 bar)	0-15 psi (0-1 bar)	0-5 psi (0-0.35 bar)		
<b>Models</b>	Digital	Digital	Time	Air	Vac	Steady	Timed	Volumetric	Teach	0-999.9 sec.	0-9.9999 sec.	0-100 psi (0-7 bar)	0-15 psi (0-1 bar)	0-5 psi (0-0.35 bar)	5-24 VDC Signal	100-240 VAC 50/60Hz
Ultimus I	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓			✓	✓
Ultimus II	✓	✓	✓	✓	✓	✓	✓		✓	✓			✓		✓	✓
Ultimus III	✓	✓	✓	✓	✓	✓	✓		✓	✓				✓	✓	✓
Ultimus IV						✓		✓							✓	✓
Ultimus V	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓			✓	✓

# Performus™ General Purpose Dispensers



## Performus I

For operator-controlled dispensing applications requiring only a manual deposit.



## Performus VII

For applications that require a high degree of process control.

Features vacuum control, a convenient Teach function that makes it simple to set initial shot size and an I/O connection. The Performus VII also includes a digital vacuum display that adds an extra degree of process control.

# Performus General Purpose Dispensers

## PERFORMUS MODELS

7012330  
(Performus I)  
0-100 psi (0-7 bar)



Vacuum

7012331  
(Performus II)  
0-100 psi (0-7 bar)



LED Display, Timer

7012332  
(Performus III)  
0-100 psi (0-7 bar)



LED Display, Timer, Vacuum

7012333  
(Performus IV)  
0-15 psi (0-1 bar)



Teach, LED Display, Timer,  
Vacuum, Input/Output

7012334  
(Performus V)  
0-100 psi (0-7 bar)

7012335  
(Performus VI)  
0-15 psi (0-1 bar)

7012336  
(Performus VII)  
0-100 psi (0-7 bar)



Teach, LED Display, Timer, Vacuum,  
Vacuum Display, Input/Output

7012337  
(Performus VIII)  
0-15 psi (0-1 bar)



## PERFORMUS MODELS AND FEATURES

Features	Dispense Time Display		Air Pressure Display		Vacuum Display	Adjustability			Modes of Operation			Time Range	Air Pressure Range		Input/Output	Universal Voltage	
	Digital	Analog	Digital	Digital	Digital	Time	Air	Vac	Steady	Timed	Teach	0-99.9 sec.	0-100 psi (0-7 bar)	0-15 psi (0-1 bar)	5-24 VDC Signal	100-240 VAC 50/60Hz	
Performus I		✓					✓	✓	✓				✓				✓
Performus II	✓		✓			✓	✓		✓	✓		✓	✓				✓
Performus III	✓		✓			✓	✓	✓	✓	✓		✓	✓				✓
Performus IV	✓		✓			✓	✓	✓	✓	✓		✓		✓			✓
Performus V	✓		✓			✓	✓	✓	✓	✓		✓	✓		✓		✓
Performus VI	✓		✓			✓	✓	✓	✓	✓		✓		✓	✓		✓
Performus VII	✓		✓	✓		✓	✓	✓	✓	✓		✓	✓		✓		✓
Performus VIII	✓		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓

# Dispenser Accessories



PART #	ACCESSORY	DESCRIPTION	ULTIMUS			PERFORMUS
			I-III	IV	V	I-VIII
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				✓	
7017133	Barrel hand grip	Hand grip only without finger switch				✓
7017131	Finger switch	Ergonomic hand grip with built-in touch sensor and high beam penlight	✓			
7016718	Finger switch	Low voltage, push button finger switch controls dispense cycle				✓
7017089	Finger switch		✓		✓	
7017288	Syringe barrel production stand	Provides full-barrel swivel, horizontal and vertical adjustment. Accepts all EFD barrels.		✓		
7021053	Syringe barrel production stand		✓		✓	✓
7017122	Workstation lamp	Mounts on flex arm and provides targeted lighting on work area	✓			
7017119	Safety shield	Provides splash protection Accessory mount (1 required for use with Ultimius IV - #7017185)	✓	✓	✓	
7017138	Production extension shelf	Provides flat work surface for other tools or dispenser stacking	✓			
7017135	Magnifying lens	1.7x magnification mounts on flex arm Accessory mount (1 required for use with Ultimius IV - #7017185)	✓		✓	
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)	✓		✓	
7017167	Vacuum pickup pen system	Vacuum generator and pen system for picking and placing small parts	✓			✓

PART #	ACCESSORY	DESCRIPTION
7013229	Dispensing tip sampler kit	Includes a selection of various types and styles of dispensing tips, pistons, tip and end caps—158 pieces
7024803	VacTweezer™ pickup tool	Useful, low cost pick-and-place tool with staticide treated kit. Includes (7) tips, (5) pad sizes
7002002	Five micron filter regulator	Provide proper air filtering for all dispensers. Order if you do not have a clean, dry, filtered factory air supply.
7016548	Five micron filter regulator with coalescing filter	Five 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

# Relius™ Tube Coating Systems

## Relius Portable Dispensers



Solvent Tube Coating Dispenser

### Tube Coating Systems

Relius tube coating systems are a fast, foolproof way to apply accurate, repeatable amounts of solvents and UV-cure adhesives on tubing, fittings and other cylindrical components.

Instead of dipping components into dishes of solvent or applying UV-cure adhesive by hand, the operator simply inserts the end of the tubing or fitting into the applicator port on the side of the Relius System. The correct amount of fluid is automatically applied every time, regardless of who performs the operation.



7012502  
Solvent Tube Coating System

7012501  
UV Adhesive Tube Coating System

7028248  
(2) spare adapter screws

UV Adhesive Tube Coating  
Dispenser

### Portable Dispensers

Versatile and inexpensive, Relius 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.

**HPD** Designed for use with EFD syringe barrels and pistons, Relius 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.



HPD™



DispensGun®

7023615 (HPD3K)  
3cc syringe barrel size

7023622 (HPD5)  
5cc syringe barrel size

7023596 (HPD10K)  
10cc syringe barrel size

7023610 (HPD30K)  
30cc syringe barrel size

7023133 (DG3)  
3cc syringe barrel size

7023137 (DG5)  
5cc syringe barrel size

7023125 (DG10)  
10cc syringe barrel size

7023134 (DG30)  
30cc syringe barrel size

7023141 (DG55)  
55cc syringe barrel size

# Relius Handheld Dispense Valves

Relius 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.



## 725-HL Handheld Piston Valve

Provides high-flow application of medium- to high-viscosity non-reactive fluids.

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.



## 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.

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.



## 752V-HL Handheld Diaphragm Valve

Ideal for gasket bonding and applying anaerobics or cyanoacrylates.

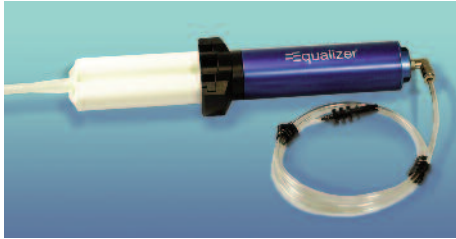
7021415 (752V-HL)  
Diaphragm Valve with Hand Lever

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 (.150")
7014851	8	3.4 mm (.135")
7014848	10	2.7 mm (.106")
7014842	12	2.2 mm (.085")
7014844	14	1.6 mm (.063")
7014846	16	1.2 mm (.047")

# Special-Purpose Dispensing Systems



## Equalizer™ 2K Dispensing Tool

The pneumatically operated Equalizer accurately dispenses 2-component (2K) materials packaged in Nordson EFD 50 mL 1:1 or 2:1 ratio cartridges.

Designed for use with Nordson EFD electropneumatic fluid dispensers

7015703  
Standard configuration provides accurate 50mL 1:1 dispensing.

7015873  
Conversion Kit allows use with 50mL 2:1 cartridges.

7015875  
Universal stand mount leaves hands free to position components.

7015864  
Transfer Kit provides ability to down pack from 2K cartridges to EFD syringe barrels.



## HP™ Series Handheld, 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.

7023590 (HP3cc)  
Uses 3cc EFD syringe barrels and pistons and produces a maximum pressure of 700 psi (48.2 bar).

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

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



## 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.

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

7018879 (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.

### MIKROS REPLACEMENT PARTS

Part #	Description
7018889	Loading tubes; 38 mm (1.5") long. (50/pkg.)
7018902	Piston installation tool. Sold individually.
7018893	Neoprene finger grip. Sold individually.
7018899	Mikros air seal O-ring. NBR (10/pkg.)
7018901	Mikros air seal O-ring. Viton (10/pkg.)
7018897	Mikros dampening O-ring. NBR (10/pkg.)

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

### MIKROS 0.25CC FLUID RESERVOIR TIPS

Polypropylene reservoirs with stainless steel chamfered tips. Packaged with tip protectors. (25) tips and pistons per box.			
Part #	Gauge	ID	Hub Color
7018881	30	0.2 mm (.006")	lavender
7018887	33	0.1 mm (.004")	grey
Polypropylene reservoirs with stainless steel blunt-end tips. Packaged with tip protectors. (25) tips and pistons per box.			
Part #	Gauge	ID	Hub Color
7018884	32	0.1 mm (.004")	yellow

# Optimum<sup>®</sup> Dispensing Components

## Optimum. The standard in fluid dispensing

What makes EFD's Optimum dispensing components better than the rest? Engineered Fluid Dispensing™. Each patent pending 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 five 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 special design that facilitates installation/removal, and a positive safety locking action that prevents accidental disengagement.

New tip caps protect fluid with a precisely engineered venting system that prevents air from entering through the luer during installation. The gripping action of the tip cap is designed to maximize the seal and yet be easily removed by the user.

*Precision-fit adapter for easy, safe attachment*

*Channeled wiper piston eliminates trapped air, waste and dripping*

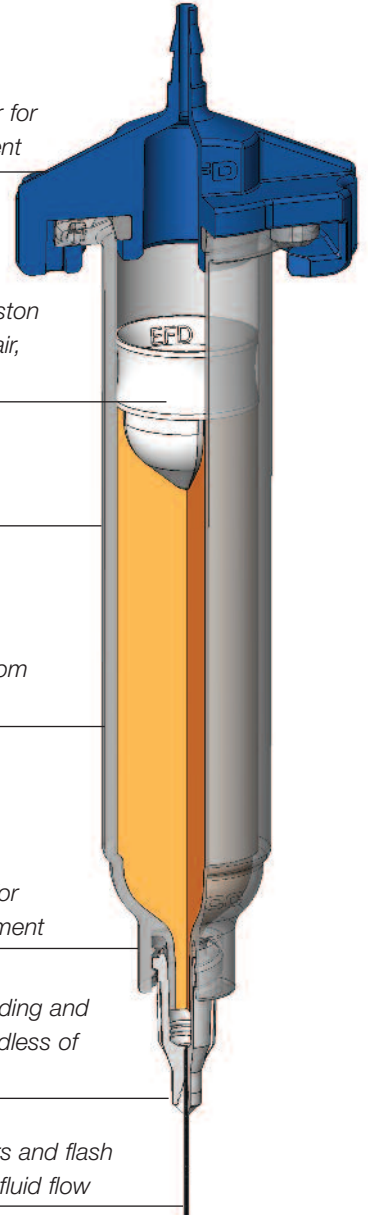
*Uniform barrel wall thickness for safety*

*0° taper barrels for smooth top-to-bottom piston travel*

*Threaded tip hubs for safe, secure attachment*

*Consistent color coding and tip diameters, regardless of style/length*

*Tips are free of burrs and flash that could obstruct fluid flow*



# Optimum Disposable Reservoir System



## 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.

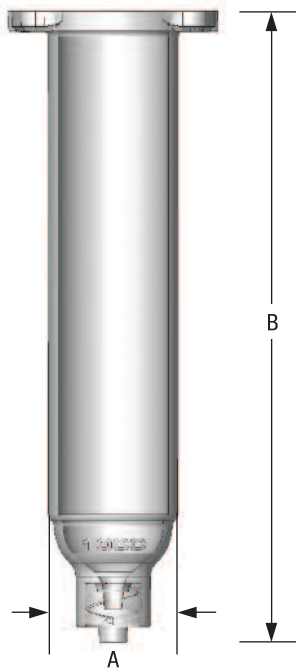
### SYRINGE BARREL & PISTON SETS

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 LV Barrier™ Piston Includes Tip Caps	QTY
3cc	7012074	7012085	7012091	7012075	(50)
5cc	7012096	7012103	7012109	n/a	(40)
10cc	7012114	7012126	7012130	7012118	(30)
30cc	7012136	7012145	7012149	7015116	(20)
55cc	7012153	7012160	7012164	n/a	(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.

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	QTY
3cc	7012072	7012083	7012089	7015616	(50)
5cc	7012094	7012101	7012107	7015617	(40)
10cc	7012112	7012122	7012128	7015618	(30)
30cc	7012134	7012143	7012147	7015619	(20)
55cc	7012155	7012158	7012162	7015620	(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.

# Optimum Dispensing Components



## Pistons

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. Available in five 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.

### SYRINGE BARREL PISTONS

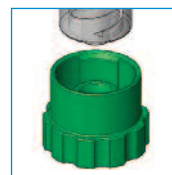
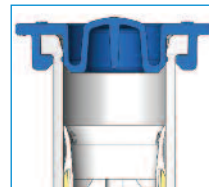
Size	White SmoothFlow	Beige SmoothFlow	Red SmoothFlow	Orange Flatwall	Blue LV Barrier	QTY
3cc	7012166	7012170	7012168	7012321	7014602	(50)
5cc	7012172	7012176	7012174	7012323	n/a	(40)
10cc	7012178	7012182	7012180	7012325	7014600	(30)
30, 55cc	7012184	7012188	7012186	7012327	7014598	(20)

## 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. 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.

One size	7012198	Blue	(50)
One size	7014469	Green	(50)

## 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 Precision Dispensing Tips

## Dispensing 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.

**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 45° and 90° bends.

**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.



PRECISION STAINLESS STEEL TIPS						Straight	Straight	Straight	Straight	45° Bend	90° Bend	45° Bend	Qty/ Box	
Gauge	Color		ID		OD		6.35 mm (0.25")	12.7 mm (0.50")	25.4 mm (1.0")	38.1 mm (1.5")	12.7 mm (0.5")	12.7 mm (0.5")		38.1 mm (1.5")
			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
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 SafetyLok hubs for a secure fit to barrel reservoirs.

• 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.

# Optimum Precision Dispensing Tips

## SMOOTHFLOW TAPERED TIPS

Gauge	Color		ID		Standard	Opaque Rigid	Qty/Box
			mm	inch			
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
20		Pink	0.58	0.023	7005009	7005006	50
22		Blue	0.41	0.016	7018298	7005007	50
25		Red	0.25	0.010	7018391	7018370	50
27		Clear	0.20	0.008	7018417	n/a	50

Use with gel cyanoacrylates, UV-cure adhesives, sealants, and particle-filled materials or any medium- to high-viscosity fluid. Molded of polyethylene with UV-light block additive.







## BRUSH TIPS

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

Spread glues and greases. Nylon bristles






## FLEXIBLE TIPS

Gauge	Color		ID		12.7 mm (0.50")	38.1 mm (1.5")	Qty/Box
			mm	inch			
15		Amber	1.36	0.053	7018085	7018080	50
18		Green	0.84	0.033	7018143	7018138	50
20		Pink	0.61	0.024	7018205	7018201	50
25		Red	0.25	0.010	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.





## 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		Black	7017715	10
5cc to 55cc		Black	7017717	10

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





## PTFE-COATED TIPS

Gauge	Color		ID		OD		12.7 mm (0.50")	Qty/Box
			mm	inch	mm	inch		
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.








## PTFE-LINED TIPS

Color	ID		12.7 mm (0.50")	25.4 mm (1.0")	Qty/Box	
	mm	inch				
	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.



## CHAMFERED TIPS

Gauge	Color		ID		38.1 mm (1.50")	12.7 mm (0.50")	6.35 mm (0.25")	Qty/Box
			mm	inch				
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	25
33		Clear	0.10	0.004	n/a	n/a	7018482	25

Use for microdot application of low viscosity fluids.

## METAL NOZZLES

Gauge	ID		Part #	Qty/Bag
	mm	inch		
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

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



# Tip Recommendations

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	●	▲	●	●
<b>Fluids</b>				
Adhesives	●	●	●	●
Anaerobics	●	▲	●	▲
Conformal Coatings	●	▲	▲	X
Cyanoacrylates	●	▲	●	●
Gel Cyanoacrylates	●	▲	●	▲
Epoxies	●	●	●	X
Greases	●	●	●	X
Light-Cure Adhesives	X	▲*	▲*	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.

## Key

- Recommended
- ▲ Satisfactory
- X Do not use



## IMPORTANT SAFETY INFORMATION

All EFD disposable components, including syringe barrels, cartridges, pistons, tip caps, end caps, and dispense tips, are precision engineered for one-time use. Attempting to clean and re-use components will compromise dispensing accuracy and may increase the risk of personal injury.

**Always wear appropriate protective equipment and clothing suitable for your dispensing application.**

Do not exceed maximum operating pressure of 100 psi (7.0kg/cm<sup>2</sup>).

Do not heat syringe barrels or cartridges to a temperature greater than 38°C (100°F).

Dispose of components according to local regulations after one-time use.

Do not clean components with strong solvents (e.g. MEK, Acetone, THF).

Cartridge retainer systems and barrel loaders should be cleaned with mild detergents only.

To prevent fluid waste, use EFD SmoothFlow™ pistons.

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

East Providence, RI USA  
USA & Canada: 800-556-3484  
+1-401-431-7000  
[info@nordsonefd.com](mailto:info@nordsonefd.com)

Dunstable, Bedfordshire, UK  
0800 585733;  
+44 (0) 1582 666334  
Ireland 00800 8272 9444  
[europe@nordsonefd.com](mailto:europe@nordsonefd.com)

Nordson India Private Limited  
+91 80 4021 3600  
Mobile: +91 98450 48481  
[india@nordsonefd.com](mailto:india@nordsonefd.com)

China: +86 (21) 3866 9006  
[china@nordsonefd.com](mailto:china@nordsonefd.com)

Singapore: +65 6796 9522  
[sin-mal@nordsonefd.com](mailto:sin-mal@nordsonefd.com)

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