

Nordson EFD Optimum® Systems

The standard in fluid dispensing



Disposable Reservoir System



SYRINGE BARREL & PISTON SETS

Each box contains one resealable bag of syringes and SmoothFlow pistons.

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

Optimum syringe barrels are molded from a proprietary polypropylene blend that gives them exceptional clarity and chemical compatibility. Pistons are made of polyethylene. Reservoirs available in clear for most fluids; transparent amber for UV and light sensitive materials (*240 to 550 nm); and opaque black. Black ensures complete light blockage. Each box contains an equal number of barrels and pistons. LV Barrier sets include tip caps and are designed for cyanoacrylate and very low viscosity fluid dispensing.

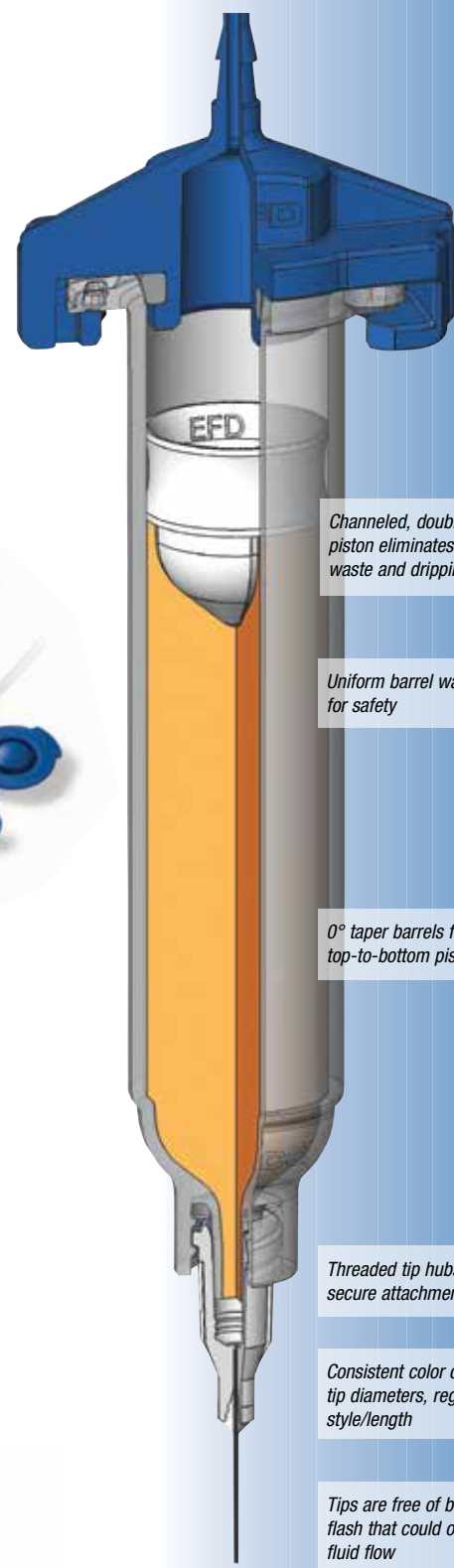


ADAPTER ASSEMBLIES

Blue molded one-piece, acetal adapter heads.

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

Adapter heads with Buna-N O-ring, flexible polyurethane air hose (3/32" ID x 5/32" OD), male quick-connect and safety clip. For general use.



Channeled, double-wiper piston eliminates trapped air, waste and dripping

Uniform barrel wall 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

SMOOTHFLOW POLYETHYLENE PISTONS

Optimum pistons mate perfectly with syringe barrels and are available in six styles to ensure control for virtually any fluid in any application.

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

White SmoothFlow pistons are used with most fluids.

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

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

Orange Flatwall pistons prevent "bouncing" when dispensing stringy fluids.

Blue LV Barrier™ pistons are used with cyanoacrylates and very low viscosity fluids.

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

END/TIP CAPS

End caps and tip caps provide an airtight seal.

Size	Blue	Green	QTY
	End Caps	End Caps	
3cc	7012190	7014470	50
5cc	7012192	7014471	40
10cc	7012194	7014472	30
30, 55cc	7012196	7014473	20

Blue Tip Cap

Size	Blue	Green	QTY
	Tip Cap	End Cap	
One size	7012198	7014469	50

Twist-on tip cap seals syringe barrel for storage.

Precision Dispense Tips

PRECISION STAINLESS STEEL TIPS

Gauge	Color	ID mm	ID inch	OD mm	OD inch	6.35 mm (0.25")	12.7 mm (0.50")	25.4 mm (1.0")	38.1 mm (1.5")	45°/12.7 mm (0.5")	90°/12.7 mm (0.5")	45°/38.1 mm (1.5")	QTY
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	7018222	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 dispense tips with polypropylene SafetyLok™ hubs for a secure fit to barrel reservoirs.

SMOOTHFLOW TAPERED TIPS

Gauge	Color	ID mm	ID inch	Standard	Opaque Rigid	QTY
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. Standard tips are molded of polyethylene with UV-light block additive. Rigid, opaque tapered tips are molded of polypropylene and the opacity delivers light-blocking functionality.

CHAMFERED TIPS

Gauge	Color	ID mm	ID inch	38.1 mm (1.50")	12.7 mm (0.50")	6.35 mm (0.25")	QTY
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.

PTFE-COATED TIPS

Gauge	Color	ID mm	ID inch	OD mm	OD inch	12.7 mm (0.50")	QTY
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 for optical media applications.

PTFE-LINED TIPS

Color	ID mm	ID inch	12.7 mm (0.50")	25.4 mm (1.0")	QTY
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.

FLEXIBLE TIPS

Gauge	Color	ID mm	ID inch	12.7 mm (0.50")	38.1 mm (1.5")	QTY
15	Amber	1.36	0.053	7018085	7018080	50
18	Green	0.84	0.033	7018143	7018138	50
20	Pink	0.48	0.019	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	ID mm	ID inch	12.7 mm (0.50")	QTY
15	Amber	1.36	0.053	7018078	50
18	Green	0.84	0.033	7024653	50
23	Orange	0.33	0.013	7024656	50

Flat ribbon deposits of thick pastes, sealants, and epoxies.



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Dispense tip dimensions are for reference. See Nordson EFD sales drawing for exact specifications.

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THE KEY TO PRODUCTIVE DISPENSING

The right amount of material at the right place is what dispensing is all about. Most assembly fluids are easy to set up and use, and with EFD dispensing products, you get precise deposits without any problems.

4 SIMPLE RULES TO REMEMBER:



- Small deposits** — small tips, low pressure, short pulse time
- Big deposits** — larger tips, higher pressure, longer time
- Thick fluids** — tapered tips, higher pressure, time as required
- Watery fluids** — small tips, low pressure, time as required

FLUIDS THAT REQUIRE SPECIAL HANDLING ARE DESCRIBED BELOW WITH RECOMMENDATIONS.

CYANOACRYLATES AND SOLVENTS

Syringe Barrels/Pistons:

Use a 3cc, 10cc or 30cc clear syringe barrel. Fill about 1/2 full and insert a blue LV Barrier™ piston just below the top of the barrel. Do not press against the cyanoacrylate. The piston stays at the top of the barrel, allowing air through to make a deposit and vacuum to prevent dripping. For gel cyanoacrylate, specify the white SmoothFlow™ piston. Fill barrel 2/3 full and push the piston down until it contacts the fluid.

Dispense Tips:

For watery cyanoacrylates, specify the PTFE-lined tip #7018388 or the short flexible tip #7018366. To drag cyanoacrylate or reach into recesses, use the long flexible tip #7018362. For gel cyanoacrylates, the tapered tip #7018391 is a good choice. No scratching. No metal to react with the cyanoacrylate. For microdots, use #7018433 or #7018462 stainless tips.

RECOMMENDED SYSTEM

Size	Cyanoacrylates Standard Adapter		Solvents Polypropylene Adapter		Clear Barrels Blue LV Barriers Pistons Tip Caps	
	QTY		QTY		QTY	
3cc	7012341	1	7012067	1	7012075	50
10cc	7012339	1	7012065	1	7012118	30
30cc	7012338	1	7012064	1	7015116	20

Note: Always use fresh cyanoacrylate with new components. Remember to protect against moisture and use a coalescing filter regulator (part #7016548) on the plant air supply to your dispenser.



ANAEROBICS AND OILS

Syringe Barrels/Pistons:

Use any convenient size clear barrel. Fill barrel about 2/3 full. Insert a white SmoothFlow piston until it contacts the fluid.

Dispense Tips:

For best fluid control, we recommend using the smaller gauge stainless steel precision tips or the all-plastic polypropylene tips. For microdots, consider the smaller size barrels. For low viscosity wicking anaerobics, use the LV Barrier piston.

RECOMMENDED SYSTEM

Size	Standard Adapter	QTY	Clear Barrels White Pistons	QTY	Leakproof Barrel Tip Caps	QTY
5cc	7012054	1	7012096	40	7012198	50
10cc	7012339	1	7012114	30	7012198	50
30cc	7012338	1	7012136	20	7012198	50
55cc	7012338	1	7012153	15	7012198	50



UV-CURE/LIGHT SENSITIVE ADHESIVES

Syringe Barrels/Pistons:

Select from transparent amber for UV and light-sensitive materials (*240 to 550nm); and opaque black to ensure complete light blockage. Fill barrel about 2/3 full. Insert a white SmoothFlow piston until it contacts the fluid.

Dispense Tips:

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. When using other tips, order the 3cc barrel opaque tip shield #7017715 or #7017717 for 5cc to 55cc barrels.

RECOMMENDED SYSTEM

Size	UV Block* Standard Adapter		UV Block* Amber Barrels White Pistons		Opaque Black Barrels White Pistons		Opaque Tip Shields		Leakproof Barrel Tip Caps	
	QTY		QTY		QTY		QTY		QTY	
3cc	7012341	1	7012085	50	7012091	50	7017715	10	7012198	50
5cc	7012054	1	7012103	40	7012109	40	7017717	10	7012198	50
10cc	7012339	1	7012126	30	7012130	30	7017717	10	7012198	50
30cc	7012338	1	7012145	20	7012149	20	7017717	10	7012198	50
55cc	7012338	1	7012160	15	7012164	15	7017717	10	7012198	50



EPOXIES, SEALANTS AND PASTES

Syringe Barrels/Pistons:

Size depends on dispense requirements. Most thick materials work well with the white piston. However, if you see too much piston bounce with stringy sealants, switch to the orange flat-walled piston. For bounce issues with thicker material, specify the clear flex piston.

Dispense Tips:

The SmoothFlow tapered tips provide the best dispensing for most fluids including thick pastes and particle-filled materials. For thicker fluids with a tendency to string, try using a smaller gauge tip and increase the air pressure. For extremely thick materials requiring small deposit control, consider one of the HPx Series high pressure tools. Contact EFD for details.

RECOMMENDED SYSTEM

Size	Standard Adapter	QTY	Clear Barrels White Pistons		Clear Barrels QTY	Flat-walled Orange Pistons		Clear Barrels QTY	
			White Pistons	QTY		Orange Pistons	QTY		
3cc	7012341	1	7012074	50	7012072	50	7012321	50	n/a
5cc	7012054	1	7012096	40	7012094	40	7012323	40	n/a
10cc	7012339	1	7012114	30	7012112	30	7012325	30	7360577
30cc	7012338	1	7012136	20	7012134	20	7012327	20	7360580
55cc	7012338	1	7012153	15	7012155	15	7012327	20	7360583



IMPORTANT SAFETY INFORMATION

All Nordson 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 (7.0 kg/cm²).

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

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.

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• Please call for additional parts/products not listed. For expert advice: info@nordsonefd.com

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