Optimum Disposable Reservoir Systems

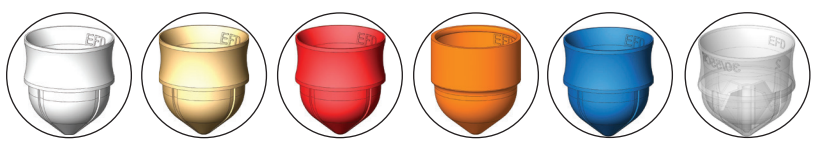
Nordson EFD

SYRINGE BARREL & PISTON SETS

Each box contains syringes and pistons in dust-free packaging.

Size	MOST FLUIDS Clear Barrels White Pistons	Light Block* Amber Barrels White Pistons	Opaque Black Barrels White Pistons	QTY
3cc	7366044	7366041	7366042	100
5cc	7366045	–	–	100
10cc	7366040	7366039	–	100
30cc	7366054	7366051	7366052	50
55cc	7366056	7366055	–	50

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 (*less than 12% visible light from 550 nm or less); and opaque black. Black ensures complete light blockage. Each box contains an equal number of barrels and pistons.

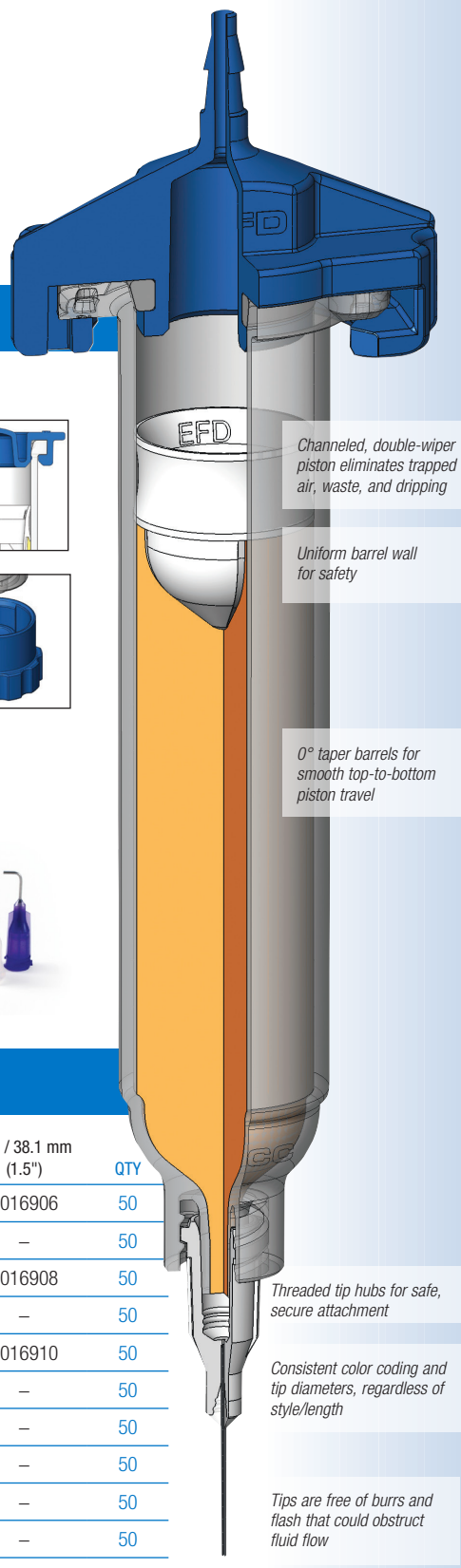


ADAPTER ASSEMBLIES

Molded one-piece, acetal adapter heads.

Size	0.9 m (3-ft.) Hose	1.8 m (6-ft.) Hose	0.9 m (3-ft.) Hose w/ filter tap
	Blue	Blue	Blue
3cc	7012341	7012059	7012063
5cc	7012054	7012058	7012062
10cc	7012339	7012057	7012061
30, 55, 70cc	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.



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.

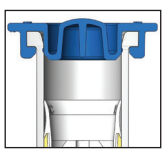
Size	White SmoothFlow	Red SmoothFlow	Beige SmoothFlow	Orange Flatwall	Blue LV Barrier	Clear Flex	QTY
3cc	7366134	7366133	7366126	7366132	7366128	7366131	100
5cc	7366141	7366140	7366135	7366139	–	7366138	100
10cc	7366125	7366124	7366117	7366123	7366119	7366122	100
30, 55, 70cc	7366084	7366083	7366076	7366082	7366078	7366081	50

For more information visit www.nordsonefd.com/SyringePistons

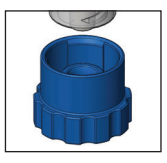
END / TIP CAPS

End caps and tip caps provide an airtight seal.

Size	Blue End Caps	Green End Caps	QTY
3cc	7366108	7366111	100
5cc	7366113	7366116	100
10cc	7366104	7366107	100
30, 55, 70cc	7366071	7366074	50



Size	Blue Tip Cap	QTY	Green Tip Cap	QTY
One size	7012198	50	7362541	1000



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	–	7018068	7018059	7018062	7018069	–	–	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	–	50
21	Purple	0.51	0.020	0.82	0.032	7005005	7018233	7018222	7018225	7018234	–	7016910	50
22	Blue	0.41	0.016	0.72	0.028	7018260	7018272	7018263	7018266	7018273	7018274	–	50
23	Orange	0.33	0.013	0.65	0.025	7018302	7018314	7018305	7018308	7018315	7018316	–	50
25	Red	0.25	0.010	0.52	0.020	7018333	7018345	7018336	7018339	7018346	7018347	–	50
27	Clear	0.20	0.008	0.42	0.016	7018395	7005008	–	–	7018404	7018405	–	50
30	Lavender	0.15	0.006	0.31	0.012	7018424	7018433	–	–	7018434	7018435	–	50
32	Yellow	0.10	0.004	0.24	0.009	7018462	–	–	–	–	–	–	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
18	Black	0.84	0.033	7018150	–	50
20	Pink	0.58	0.023	7005009	7005006	50
20	Black	0.58	0.023	7018211	–	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	–	50
27	Clear	0.20	0.008	7018417	–	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. 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	–	7018129	–	50
20	Pink	0.61	0.024	7018188	–	–	50
22	Blue	0.41	0.016	7018281	–	–	50
23	Orange	0.33	0.013	–	7018321	–	50
25	Red	0.25	0.010	–	7018352	–	50
27	Clear	0.20	0.008	–	–	7015236	50
33	Clear	0.10	0.004	–	–	7018482	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	1.25	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.

OVAL TIPS

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

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

CERAMIC MICRODOT TIPS

Gauge	Color	ID mm	ID inch	Part #	QTY
37	Black	0.05	0.002	7364054	1
37	Black	0.05	0.002	7364055	10
37	Silver	0.05	0.002	7364386	1
37	Silver	0.05	0.002	7364540*	1

Ceramic MicroDot® tips can produce precise micro-deposits as small as 100 µm. They are ideal for dispensing UV-cure adhesives and other assembly fluids commonly used in the electronic and life science industries. Compatible with fine particle-filled materials. Available with black polypropylene or stainless steel hubs.

*For use with PICO valves.

PRECISION NOZZLE TIPS

Gauge	ID mm	ID inch	Part # QTY: 1 pc.	Part # QTY: 10 pc.
21	0.50	0.020	7365112	7365121
22	0.40	0.016	7365110	7365119
24	0.30	0.012	7365108	7365117
25	0.25	0.010	7365107	7365116
27	0.20	0.008	7365106	–
30	0.15	0.006	7365105	7365114
32	0.10	0.004	7365104	7365113

Stainless steel precision nozzles offer orifice sizes from 100 to 500 µm and are ideal for applications in the compact camera module (CCM), LED, semiconductor, automotive electronics, and high-precision industrial markets. Use with very low-viscosity fluids and particle-filled pastes.

Nordson EFD

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

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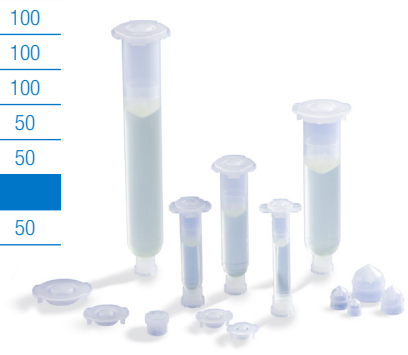
Optimum Disposable Reservoir Systems

OPTIMUM CLASS VI

Size	Class VI Clear Barrels	Class VI Clear Pistons	Class VI Clear End Caps	QTY
3cc	7366097	7366130	7366110	100
5cc	7366103	7366137	7366115	100
10cc	7366091	7366121	7366106	100
30cc	7366062	7366080	7366073	50
55cc	7366068	7366080	7366073	50
CLASS VI TIP CAPS				
–	7364594	–	–	50



Class VI components are made from United States Pharmacopeia (USP) Class VI virgin resin to simplify process validation for medical manufacturers.

Optimum Class VI pistons are designed for use with Class VI barrels only.

OPTIMUM ECO

Size	ECO Natural Barrels	ECO Natural Pistons	ECO Natural End Caps	QTY
3cc	7366096	7366129	7366109	100
5cc	7366102	7366136	7366114	100
10cc	7366090	7366120	7366105	100
30cc	7366061	7366079	7366072	50
55cc	7366067	7366079	7366072	50
ECO TIP CAPS				
–	7364679	–	–	50

ECO components are manufactured from sustainably-sourced polyethylene and feature a bio-based content rating of 94% to 96%.

Optimum ECO pistons are designed for use with ECO barrels only.

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

CERTIFIED made by EFD in the U.S.A. FOR INDUSTRIAL USE

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	QTY
3cc	7012341	1
10cc	7012339	1
30cc	7012338	1

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
3cc	7012341	1	7366044	100	7012198	50
5cc	7012054	1	7366045	100	7012198	50
10cc	7012339	1	7366040	100	7012198	50
30cc	7012338	1	7366054	50	7012198	50
55cc	7012338	1	7366056	50	7012198	50

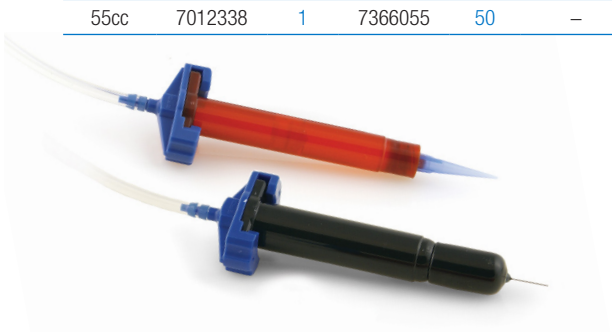
UV-CURE / LIGHT SENSITIVE ADHESIVES

Syringe Barrels / Pistons

Select from transparent amber for UV and light-sensitive materials (*less than 12% visible light from 550 nm or less); 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, translucent tips are molded of polyethylene and the colored versions contain a light-block 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	QTY	UV Block* Amber Barrels White Pistons	QTY	Opaque Black Barrels White Pistons	QTY	Opaque Tip Shields	QTY	Leakproof Barrel Tip Caps	QTY
3cc	7012341	1	7366041	100	7366042	100	7017715	10	7012198	50
5cc	7012054	1	–	–	–	–	7017717	10	7012198	50
10cc	7012339	1	7366039	100	–	–	7017717	10	7012198	50
30cc	7012338	1	7366051	50	7366052	50	7017717	10	7012198	50
55cc	7012338	1	7366055	50	–	–	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	QTY	Clear Barrels	QTY	Flat-walled Orange Pistons	QTY
3cc	7012341	1	7366044	100	7366095	100	7366132	100
5cc	7012054	1	7366045	100	7366101	100	7366139	100
10cc	7012339	1	7366040	100	7366089	100	7366123	100
30cc	7012338	1	7366054	50	7366060	50	7366082	50
55cc	7012338	1	7366056	50	7366066	50	7366082	50

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.

For Nordson EFD sales and service in over 40 countries, contact Nordson EFD or go to www.nordsonefd.com.

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