

The Optimum™ System

The new 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 Blue LV Barrier	QTY
	Clear Barrels White Pistons	Amber Barrels White Pistons	Black Barrels White Pistons	Black Barrels White Pistons		
3cc	7012074	7012085	7012091	7012075	(50)	
5cc	7012096	7012103	7012109	n/a	(40)	
10cc	7012114	7012126	7012130	7012118	(30)	
30cc	7012136	7012145	7012149	n/a	(20)	
55cc	7012153	7012160	7012164	n/a	(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; translucent dark amber for UV and light sensitive materials (*240 to 550nm); and opaque black for materials sensitive to light above 550nm. 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.



SMOOTHFLOW POLYETHYLENE PISTONS

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

Size	White	Red	Beige	Orange	Blue	QTY
	SmoothFlow	SmoothFlow	SmoothFlow	Flatwall	LV Barrier	
3cc	7012166	7012168	7012170	7012321	7017750	(50)
5cc	7012172	7012174	7012176	7012323	n/a	(40)
10cc	7012178	7012180	7012182	7012325	7017858	(30)
30, 55cc	7012184	7012186	7012188	7012327	n/a	(20)

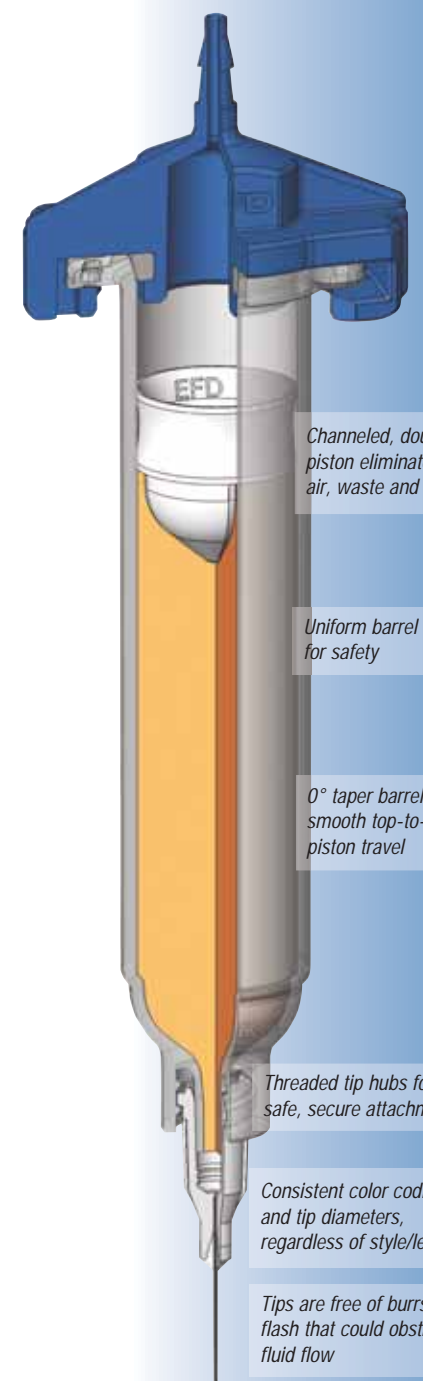
- White SmoothFlow pistons** are used with most fluids.
- Beige pistons** are loose fitting and used with air-entrapped fluids.
- Red pistons** are tight fitting and used with mechanical dispensers.
- Orange flat-walled pistons** prevent "bouncing" when dispensing stringy fluids.
- Blue LV Barrier™ pistons** are used with cyanoacrylates and very low viscosity fluids.

ADAPTER ASSEMBLIES

Blue molded one-piece, acetal adapter heads

Size	Blue	Blue	Blue
	0.9 m (3-ft.) Hose	1.8 m (6-ft.) Hose	0.9 m (3-ft.) Hose w/ filter tap
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

Precision Dispense Tips

PRECISION STAINLESS STEEL TIPS (50 PER BOX)

Gauge	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")	Color
14	7018029	7018043	7018032	7018035	7018044	7018045	7016906	Olive
15	7018056	7018068	7018059	7018062	7018069	7018070	n/a	Amber
18	7018107	7018122	7018110	7018113	7018123	7018124	7016908	Green
20	7018163	7018178	7018166	7018169	7018179	7018180	n/a	Pink
21	7005005	7018233	7018222	7018225	7018234	7018235	7016910	Purple
22	7018260	7018272	7018263	7018266	7018273	7018274	n/a	Blue
23	7018302	7018314	7018305	7018308	7018315	7018316	n/a	Orange
25	7018333	7018345	7018336	7018339	7018346	7018347	n/a	Red
27	7018395	7005008	n/a	n/a	7018404	7018405	n/a	Clear
30	7018424	7018433	n/a	n/a	7018434	7018435	n/a	Lavender
32	7018462	n/a	n/a	n/a	n/a	n/a	n/a	Yellow

Burr-free, polished, passivated stainless steel dispense tips with polypropylene SafetyLok™ hubs for a secure fit to barrel reservoirs.

SMOOTH-FLOW TAPERED TIPS (50 PER BOX)

Gauge	Standard	Opaque Rigid	Color
14	7018052	7018049	Olive
16	7018100	7018097	Grey
18	7018158	7018147	Green
20	7005009	7005006	Pink
22	7018298	7005007	Blue
25	7018391	7018370	Red
27	7018417	n/a	Clear

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.

CHAMFERED TIPS (50 PER BOX)

Gauge	12.7 mm (0.50")	Color
18	7018129	Green
23	7018321	Orange
25	7018352	Red
33*	7018482*	Clear

*7018482 is 6.35 mm (0.25") long and packaged 25 tips per box.

Gauge	38.1 mm (1.5")	Color
20	7018188	Pink
22	7018281	Blue

PTFE-COATED TIPS (20 PER BOX)

Gauge	ID	OD	12.7 mm (0.50")	Color
21	0.020	0.033	7018243	Purple
23	0.013	0.026	7018326	Orange

Controls wicking to stop drips for optical media applications.

PTFE-LINED TIPS (50 PER BOX)

ID	12.7 mm (0.50")	25.4 mm (1.0")	Color
0.020"	7018256	7005003	Grey
0.006"	7018388	7005004	Pink

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

FLEXIBLE TIPS (50 PER BOX)

Gauge	12.7 mm (0.50")	38.1 mm (1.5")	Color
15	7018085	7018080	Amber
18	7018143	7018138	Green
20	7018205	7018201	Pink
25	7018366	7018362	Red

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.

COLOR CODING FOR TIP SIZES

Color	Gauge	Inner Dia.		Outer Dia.	
		mm	inch	mm	inch
Olive	14	1.54	.060	1.83	.072
Amber	15	1.36	.053	1.65	.065
Grey	16	1.19	.047	n/a	n/a
Green	18	0.84	.033	1.27	.050
Pink	20	0.61	.024	0.91	.036
Purple	21	0.51	.020	0.82	.032
Blue	22	0.41	.016	0.72	.028
Orange	23	0.33	.013	0.65	.025
Red	25	0.25	.010	0.52	.020
Clear	27	0.20	.008	0.42	.016
Lavender	30	0.15	.006	0.31	.012
Yellow	32	0.10	.004	0.24	.009

Note: OD dimensions: stainless tips only. Whatever tip style, all sizes are color coded to ensure the specified size is used.

www.efd-inc.com

Molded silicone-free in silicone-free facilities by EFD. • Available worldwide.
• Please call for additional parts/products not listed. For expert advice: info@efd-inc.com

EFD, Inc.
East Providence, RI USA
USA & Canada: 800-556-3484
+1-401-434-1680 (outside the USA)
info@efd-inc.com www.efd-inc.com

EFD International Inc.
Dunstable, Bedfordshire, UK
0800 585733 or +44 (0) 1582 666334
Ireland 00800 8272 9444
europa@efd-inc.com www.efd-inc.com

EFD, Inc., Asia
China: +86 (21) 3866 9166
Singapore: +65 6796 9630
china@efd-inc.com www.efd-inc.com/cn
sin-mal@efd-inc.com

The Optimum System

The new standard in fluid dispensing

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 or 10cc 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

	Cyanoacrylates Standard Adapter	Solvents Polypropylene Adapter	Clear Barrels Blue LV Barriers Tip Caps
3cc	7012341 (1)	7012067 (1)	7012075 (50)
10cc	7012339 (1)	7012065 (1)	7012118 (30)

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	Clear Barrels White Pistons	Leakproof Barrel Tip Caps
3cc	7012341 (1)	7012074 (50)	7012198 (50)
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 translucent 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:

For most deposits, we recommend the tapered tips which have a special UV-blocking additive. When using other tips, order the 3cc barrel opaque tip shield #7017715 or #7017717 for 5cc to 55cc barrels.

RECOMMENDED SYSTEM

Size	Light Block* Standard Adapter	Light Block* Amber Barrels White Pistons	Opaque Black Barrels White Pistons	Opaque Tip Shields	Leakproof Barrel Tip Caps
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.

Dispense Tips:

The smooth-flow 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	Clear Barrels White Pistons	Clear Barrels	Flat-walled Orange Pistons
3cc	7012341 (1)	7012074 (50)	7012072 (50)	7012321 (50)
5cc	7012054 (1)	7012096 (40)	7012094 (40)	7012323 (40)
10cc	7012339 (1)	7012114 (30)	7012112 (30)	7012325 (30)
30cc	7012338 (1)	7012136 (20)	7012134 (20)	7012327 (20)
55cc	7012338 (1)	7012153 (15)	7012155 (15)	7012327 (20)



www.efd-inc.com

Molded silicone-free in silicone-free facilities by EFD. • Available worldwide.
• Please call for additional parts/products not listed. For expert advice: info@efd-inc.com

EFD, Inc.
East Providence, RI USA
USA & Canada: 800-556-3484
+1-401-434-1680 (outside the USA)
info@efd-inc.com www.efd-inc.com

EFD International Inc.
Dunstable, Bedfordshire, UK
0800 585733 or +44 (0) 1582 666334
Ireland 00800 8272 9444
europa@efd-inc.com www.efd-inc.com

EFD, Inc., Asia
China: +86 (21) 3866 9166
Singapore: +65 6796 9630
china@efd-inc.com www.efd-inc.com/cn
sin-mal@efd-inc.com