Atlas™ Barrel Filling Systems

Operating Manual

7022446 (2.5 oz), **7022447** (6 oz), **7022445** (12 oz), **7013568** (20 oz), **7013901** (32 oz), & **7022452** (1/10 Gallon)

Electronic pdf files of Nordson EFD manuals are also available at www.nordsonefd.com

Nordson EFD

Contents

Nordson EFD Product Safety Statement

Equipment Misuse Hazard

GENERAL SAFETY – Any use of the equipment and related accessories not consistent with that described in this manual, such as modifying or removing parts, over-pressurizing, using incompatible substances, or using worn, damaged or incompatible parts can cause them to rupture resulting in serious bodily harm, including substances splashed in the eyes or on the skin, or fire, explosion or other property damage. NEVER alter or modify any part of this equipment, as doing so may cause it to malfunction. CHECK all system components regularly and replace any worn or damaged parts with Nordson EFD supplied or approved parts. BE SURE that all dispensing equipment and accessories are rated to withstand the maximum operating pressure of the system.

Personal Protective Equipment

Wear all protective eyewear, gloves, clothing, and respirator as recommended by the manufacturer of the materials used.

Material Compatibility

BE SURE that all materials, including their vapors, contained in the system are compatible with all the materials. Read the material manufacturer's literature, including the MSDS (Material Safety Data Sheet) and observe all warnings before circulating materials through the system.

User's Responsibility

It is the responsibility of the user to ensure the filling system is installed in a manner that complies with all local and national jurisdictional requirements.

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 6.9 bar (100 psi).
- 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.

Nordson EFD Product Safety Statement (continued)

Tipping and Dropping Hazard

BE SURE that the filling system is placed on a hard, level surface and that all tubing lengths are sufficient to allow free motion of all movable components attached to the machine. DO NOT pull on tubing to move the machine. Tipping the machine or otherwise supporting it on its side can cause it to be unstable, resulting in possible damage.

If any system components are damaged or worn, they must be replaced with EFD supplied or approved parts before returning to service.

Tubing Safety

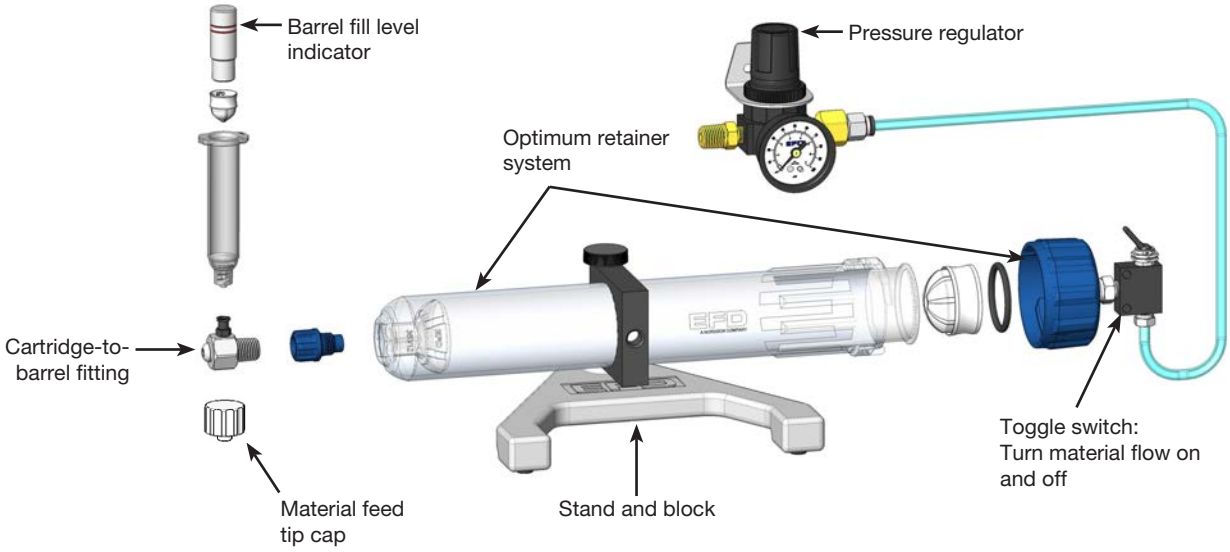
Pressurized tubing can be very dangerous. Tubing whose integrity is compromised due to wear, damage or misuse can develop a leak, spraying materials at high pressure. This spray can enter the eyes or cover the skin or cause other serious bodily injury, fire or property damage. Before pressurizing any system, examine all tubing for cuts, wear, bulges and leaks. If any of these conditions exist, replace the tubing immediately with EFD supplied or approved tubing. Do not try to repair a damaged tube.

1. BE SURE all tubing connections to the system are properly secured.
2. BE SURE that the material to be dispensed is compatible with the system.

Atlas Barrel Filling Systems: Series 2.5 oz, 6 oz, 12 oz, 20 oz, & 32 oz

Nordson EFD barrel filling systems transfer thick fluids from cartridges to small barrel reservoirs for easier handling in assembly operations. EFD barrel filling systems Series use a 2.5 oz, 6 oz, 12 oz, 20 oz, or 32 oz cartridge reservoir.

EFD barrel filling systems include the stand with retainer block, Optimum™ retainer system, (1) empty cartridge reservoir and piston, material feed tip cap, cartridge-to-barrel fitting, 100 psi (6.9 bar) air pressure regulator with gauge and mounting bracket, manual 3-way toggle air valve with air hose assembly and (3) barrel fill level indicator plugs.



Atlas Barrel Filling Systems: Series 2.5 oz, 6 oz, 12 oz, 20 oz, & 32 oz (continued)

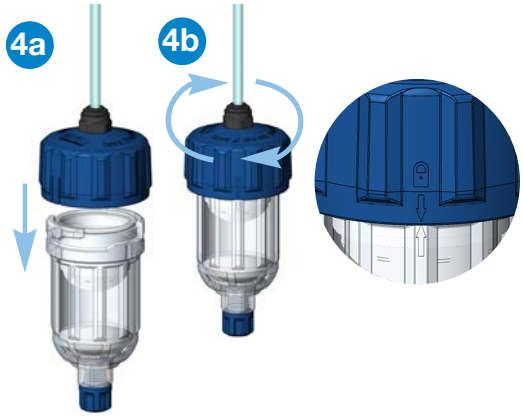
Series Setup

1. Install the 6.9 bar (100 psi) air pressure regulator assembly into a filtered air supply. Included with the regulator are fittings for plumbing the regulator into existing air lines. A wall-mounting bracket is also supplied.
2. Set the pressure to zero. Do not connect the air line from the barrel loader to the regulator until the cartridge reservoir has been filled and the retainer cap is installed.
3. Remove the cartridge retainer from the cartridge stand.
4. Unscrew the retainer cap and remove the cartridge reservoir from the retainer.

   Cap installation instructions:

   a. Place the retainer cap on the retainer body.

   b. Twist the retainer cap clockwise until it locks in place and the arrow below the lock icon on the cap aligns with the arrow on the retainer body.
5. Seal the threaded end of the cartridge with the outlet cap supplied.

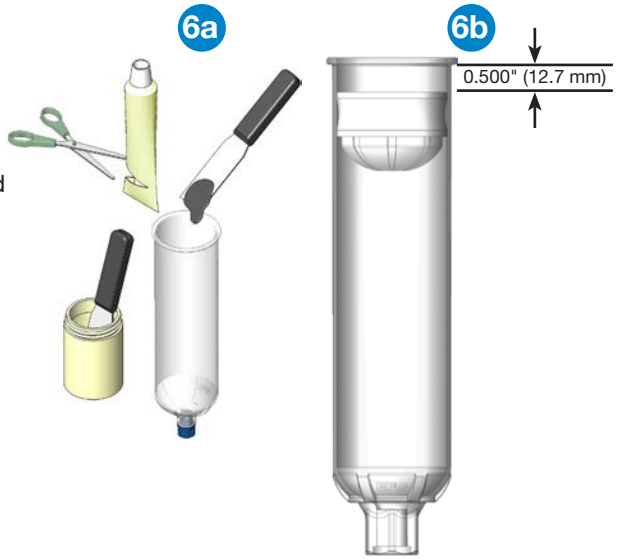


6. Load the cartridge with your material.

   Filling instructions:

   a. When filling cartridges, leave a gap of at least 0.5" (12.7 mm) between the top of the piston and the top of the cartridge so that the retainer cap can be installed.

   b. Once loaded, insert the piston while squeezing the cartridge slightly to allow air to pass by the piston during installation.
7. Place the filled cartridge reservoir into the retainer.
8. Reattach the retainer cap. Remove the cartridge outlet cap and install the cartridge-to-barrel fitting into the threaded end of the cartridge reservoir (hand tighten only).



9. Place the cartridge reservoir assembly into the cartridge stand. Orient the cartridge-to-barrel fitting to face upward. Tighten the retainer thumb screw.
10. Ensure that the toggle air valve is positioned toward the cartridge retainer cap (OFF). Install the air line from the barrel loader to the air pressure regulator outlet.

Atlas Barrel Filling Systems: Series 2.5 oz, 6 oz, 12 oz, 20 oz, & 32 oz (continued)

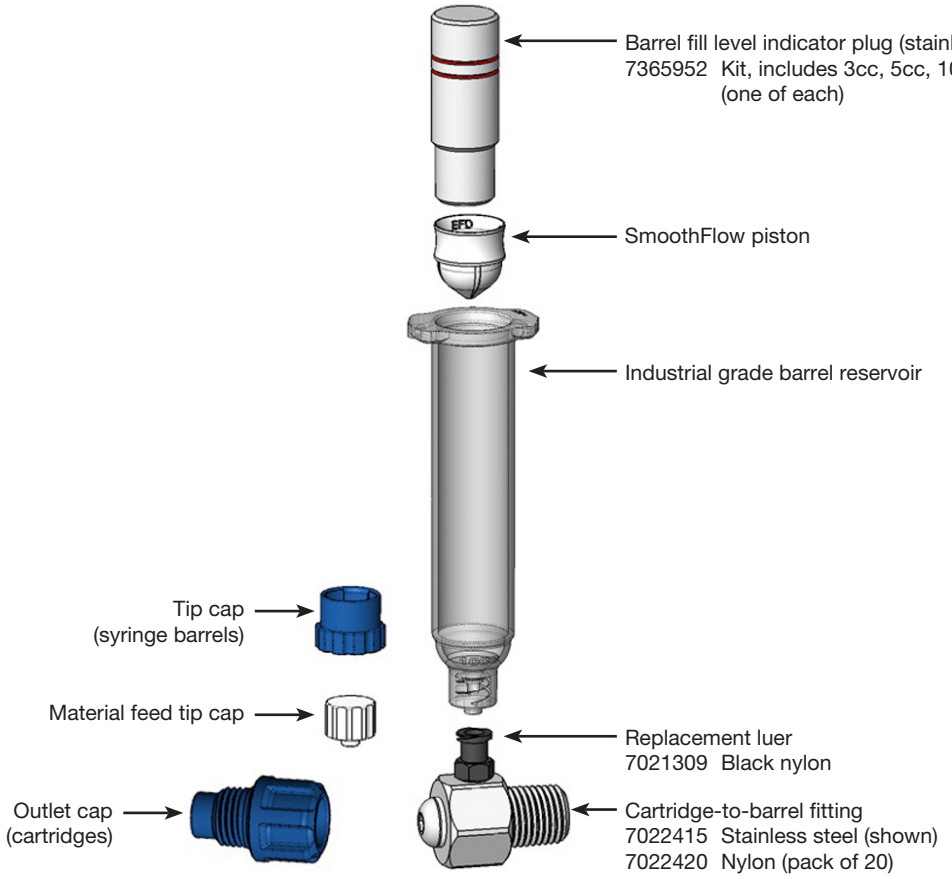
Series Operation

1. Prepare the barrel reservoirs for loading by first inserting a SmoothFlow piston into the barrel. Use the barrel fill level indicator plug to push the piston down to the bottom of the barrel. Leave the fill indicator plug in the barrel.

⚠ CAUTION

Do not overtighten or you may strip the barrel fitting.

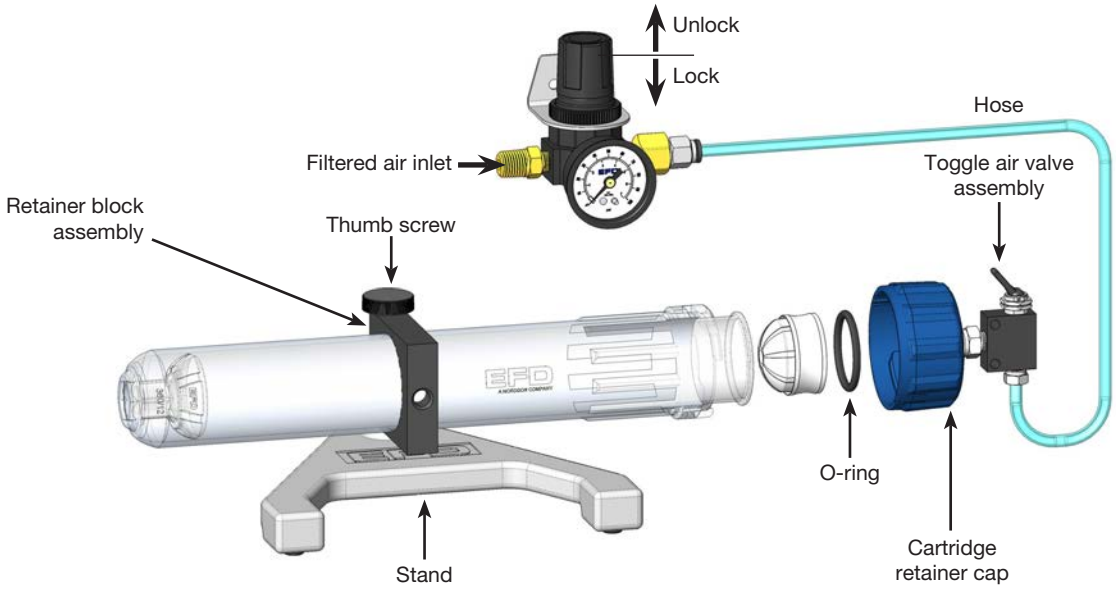
2. Remove the material feed tip cap from the cartridge-to-barrel fitting, then twist on the barrel. Only 1/2 turn is required.
3. Pull out the air pressure regulator knob until it clicks into the unlocked position. Turn clockwise to adjust the air pressure to 1.4 bar (20 psi). This is a starting point. More or less pressure may be required, depending on the viscosity of the material.
4. Place your hand over the barrel fill plug to prevent it from popping out due to expanding air as filling operation begins.
5. Switch the toggle to the ON position, away from the cap. Watch the fill rate carefully and adjust the pressure as necessary to regulate the fill rate. Switch the toggle OFF to stop the fill when the red line on the fill indicator is level with the top of the barrel (illustrated on the front page).
6. Remove the barrel and immediately install the next barrel. Or, if filling has been completed, install the material feed tip cap.



Atlas Barrel Filling Systems: Series 2.5 oz, 6 oz, 12 oz, 20 oz, & 32 oz (continued)

Replacement Parts

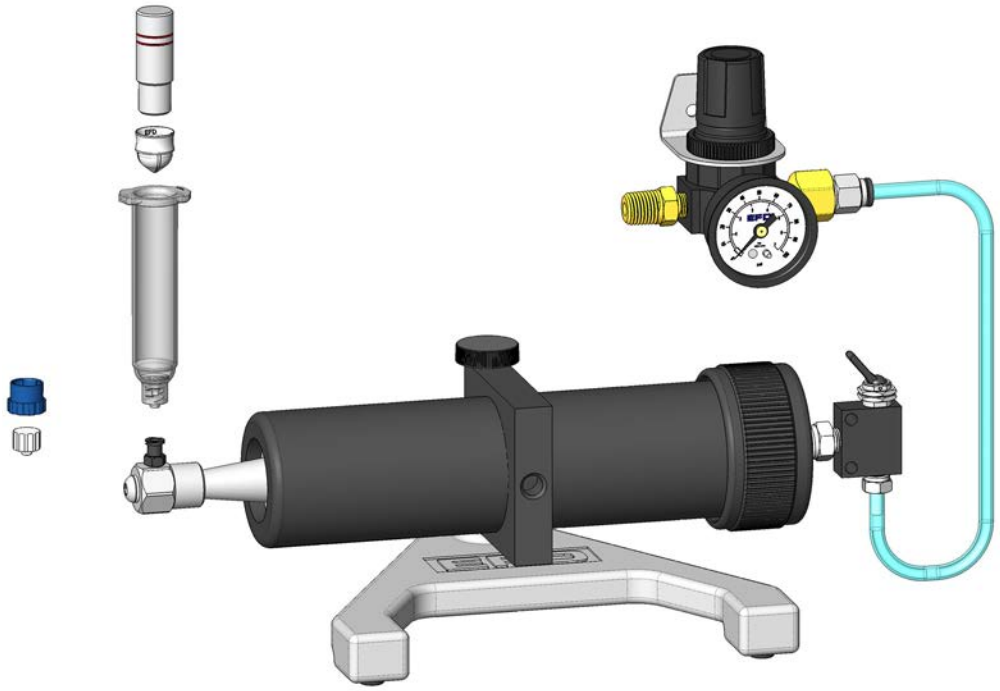
Part #	Description
7014866	100 psi (6.9 bar) air pressure gauge
7002004	Hose, 6 mm OD tubing
7013857	Retainer body, 2.5 oz
7013858	Retainer body, 6 oz
7013859	Retainer body, 12 oz
7013860	Retainer body, 20 oz
7013900	Retainer body, 32 oz
7015496	Toggle air valve assembly
7012531	Retainer cap, 2.5 / 6 / 12 oz
7012532	Retainer cap assembly, 20 / 32 oz
7014373	Retainer cap O-ring (Buna-N), 2.5 /6 / 12 oz (pack of 2)
7022409	Retainer block assembly, 2.5 / 6 / 12 oz
7013554	Retainer block assembly, 20 / 32 oz



Atlas Barrel Filling Systems: Series (1/10 Gallon)

Nordson EFD barrel filling systems loader transfers thick fluids from standard pre-filled 1/10 gallon (300 mL) caulking / sealant cartridges to small barrel reservoirs for easier fluid handling in assembly operations.

Nordson EFD barrel filling systems loader includes the stand with retainer block, 1/10 gallon (300 mL) retainer, cap and toggle air valve assembly, material feed tip cap, nozzle-to-barrel adapter, 6.9 bar (100 psi) air pressure regulator with gauge and mounting bracket, and (3) barrel fill level indicator plugs.

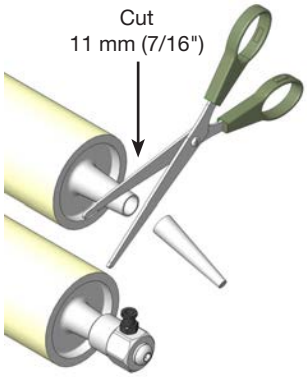


Atlas Barrel Filling Systems: Series (1/10 Gallon) (continued)

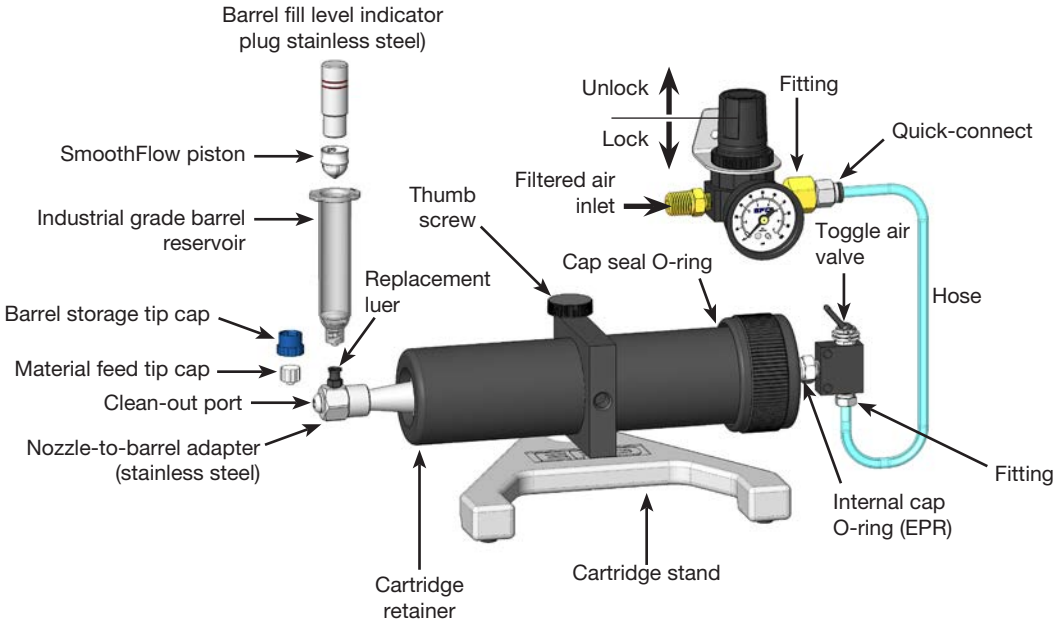
Series Setup

1. Install the 6.9 bar (100 psi) air pressure regulator assembly into a filtered air supply. Included with the regulator are fittings for plumbing the regulator into existing air lines. A wall-mounting bracket is also supplied.
2. Set the pressure to zero. Do not connect the air line from the barrel loader to the regulator until the caulking tube is inserted into the 1/10 gallon (300 mL) retainer.
3. Cut the nozzle of the caulking tube where the diameter is 11 mm (7/16"). Puncture the inner seal.
4. Install the caulking tube into the retainer and install the cap assembly.
5. Thread the nozzle-to-barrel adapter onto the nozzle where it was cut.
6. Push toward the nozzle while turning the adapter clockwise. The adapter will cut threads into the nozzle and secure itself as it is tightened.

   It may be necessary to orient the retainer and toggle air valve assembly so that the barrel fitting faces upward after it has been secured to the nozzle. Loosen the thumb screw on the retainer block, and rotate the cap and retainer assembly until the nozzle-to-barrel adapter is positioned vertically.
7. Ensure that the toggle air valve is positioned toward the cartridge retainer cap (OFF). Now install the air line from the barrel loader to the air pressure regulator outlet.



Cut where diameter = 11 mm (7/16"). Then screw fitting on cartridge as shown. The fitting will cut its own threads into the cartridge nozzle.



Atlas Barrel Filling Systems: Series (1/10 Gallon) (continued)

Series Operation

1. Prepare the barrel reservoirs for loading by first inserting a SmoothFlow piston into the barrel. Use the barrel fill level indicator plug to push the piston down to the bottom of the barrel. Leave the fill indicator plug in the barrel.

⚠ CAUTION

Do not overtighten or you may strip the barrel fitting.

2. Remove the material feed tip cap from the nozzle-to-barrel adapter and twist on the barrel reservoir, piston and fill indicator assembly. Only 1/2 turn is required.
3. Pull out the air regulator knob until it clicks into the unlocked position. Turn clockwise to adjust the air pressure to 1.4 bar (20 psi). This is a starting point. More or less pressure may be required, depending on the viscosity of the material.
4. Place your hand over the barrel fill plug to prevent it from popping out due to expanding air as filling operation begins.
5. Switch the toggle to the ON position, away from the cap. Watch the fill rate carefully and adjust the pressure as necessary to regulate the fill rate. Switch the toggle OFF to stop the fill when the red line on the fill indicator is level with the top of the barrel (shown on the cover).
6. Remove the barrel and immediately twist on a barrel storage tip cap to seal barrel output end. To continue filling, install the next barrel. Or if filling has been completed, install material feed tip cap.

Atlas Barrel Filling Systems: Series (1/10 Gallon) (continued)

Replacement Parts

Part #	Description
7014866	100 psi (6.9 bar) air pressure gauge
7002004	Hose, 6 mm OD tubing
7014868	Fitting — 1/4 FPT x 1/8 MPT BR
7022424	30cc barrel fill level indicator plug (stainless steel)
7021309	Replacement luer black nylon
7022440	Nozzle-to-barrel adapter (stainless steel)
7016635	Male quick-connect, 3/32 ID hose
7022414	Toggle air valve

Optimum Component and Cartridge Systems

For Use with Atlas Barrel Loaders

Syringe Barrel & Piston Sets

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

Size	Most Fluids Clear Barrels White Pistons	UV/Light Sensitive* Amber Barrels White Pistons	UV/Light Block 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

Sets are available in clear for most fluids; translucent amber for UV and light-sensitive materials (*240 to 550 nm); and opaque black for materials sensitive to light above 550 nm.

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

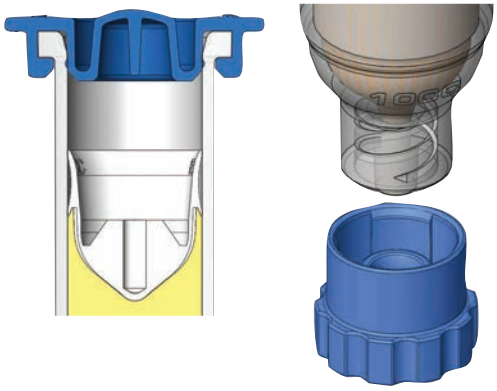
Snap-Tight End and Tip Caps

Snap-on end caps provide a tight seal.

Size	Blue	Qty
3cc	7366108	100
5cc	7366113	100
10cc	7366104	100
30, 55, 70cc	7366071	50

Twist-on tip cap seals syringe barrel.

Size	Blue	Qty
One size	7012198	50



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.

Optimum Component and Cartridge Systems (continued)

Cartridges

Clear Cartridges		
Part #	**Size**	**Qty/Box**
7659163	2.5 fl oz (75 mL)	25
7012398	6 fl oz (180 mL)	25
7012407	12 fl oz (360 mL)	25
7012416	20 fl oz (600 mL)	10
7014088	32 fl oz (960 mL)	10
Amber Cartridges		
Part #	**Size**	**Qty/Box**
7659166	2.5 fl oz (75 mL)	25
7012399	6 fl oz (180 mL)	25
7012408	12 fl oz (360 mL)	25
7012736	20 fl oz (600 mL)	10
7014089	32 fl oz (960 mL)	10
Black Cartridges		
Part #	**Size**	**Qty/Box**
7012400	6 fl oz (180 mL)	25
7012409	12 fl oz (360 mL)	25
7013878	20 fl oz (600 mL)	10
7014091	32 fl oz (960 mL)	10

Optimum Component and Cartridge Systems (continued)

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.

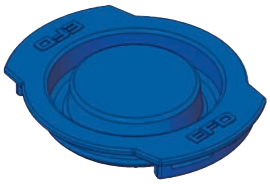
Pistons		
Part #	**Size**	**Qty/Box**
7012419	2.5, 6, 12 fl oz (75, 180, 380 mL)	25
7012421	20, 32 fl oz (600, 960 mL)	10
7012420	2.5, 6, 12 fl oz (75, 180, 380 mL)	250
7012422	20, 32 fl oz (600, 960 mL)	100

Outlet / End 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.

End Caps			
Part #	**Size**	**Color**	**Qty/Box**
7012423	2.5, 6, 12 fl oz (75, 180, 380 mL)	Blue	25
7012425	20, 32 fl oz (600, 960 mL)	Blue	10
7012424	2.5, 6, 12 fl oz (75, 180, 380 mL)	Blue	250
7012426	20, 32 fl oz (600, 960 mL)	Blue	100
Outlet Caps			
Part #	**Size**	**Color**	**Qty/Box**
7012427	All	Blue	25
7012428	All	Blue	250



Nordson

EFD

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