

# Atlas™ Barrel Filling Systems

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



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**Nordson**  
EFD



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# 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 Cartridge 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.

# Nordson EFD Product Safety Statement

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 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.

## Tipping and Dropping Hazard

BE SURE that the Cartridge 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.

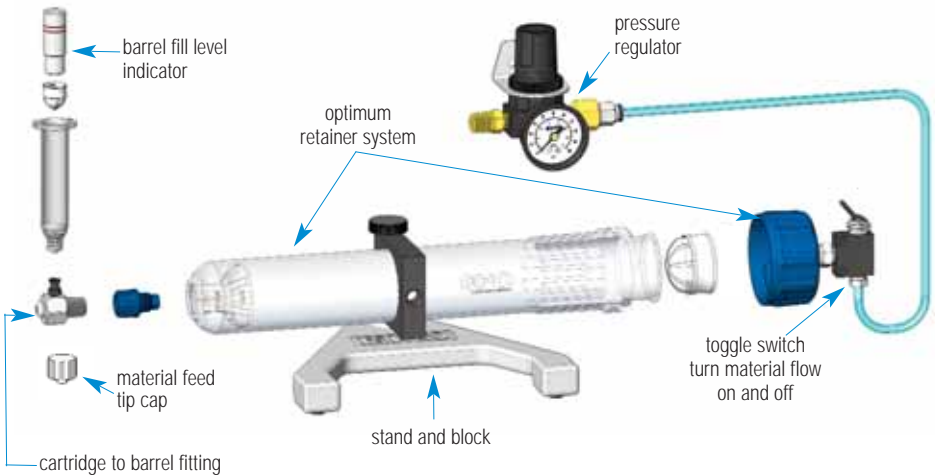


# ATLAS Barrel Filling Systems

7022446 (2.5 oz), 7022447 (6 oz), 7022445 (12 oz), 7013568 (20 oz), & 7013901 (32 oz) Series

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.



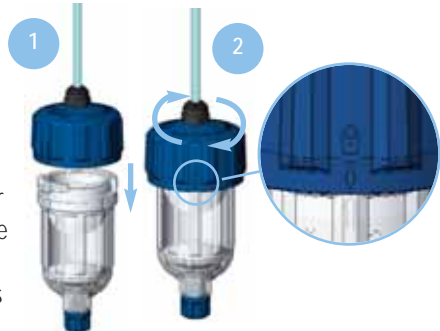
# Series Setup

7022446 (2.5 oz), 7022447 (6 oz), 7022445 (12 oz), 7013568 (20 oz), & 7013901 (32 oz)

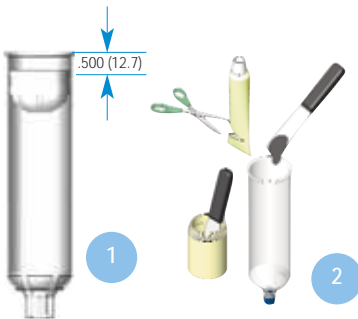
1. Install the 100 psi (6.9 bar) air pressure regulator assembly into a filtered air supply. Included with the regulator are fittings for plumbing the regulator into existing air lines. A wall-mounting bracket is also supplied.
2. Set the pressure to zero. Do not connect the air line from the barrel 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:**  
Place the retainer cap on the retainer body. 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:** When filling cartridges, leave a gap of at least .5 inches (12.7mm) between the top of the piston and the top of the cartridge so that the retainer cap can be installed.
- 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. Insure 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.

# Series Operation

7022446 (2.5 oz), 7022447 (6 oz), 7022445 (12 oz), 7013568 (20 oz), & 7013901 (32 oz)

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.
2. Remove the material feed tip cap from the cartridge-to-barrel fitting, then twist on the barrel. Only 1/2 turn is required.

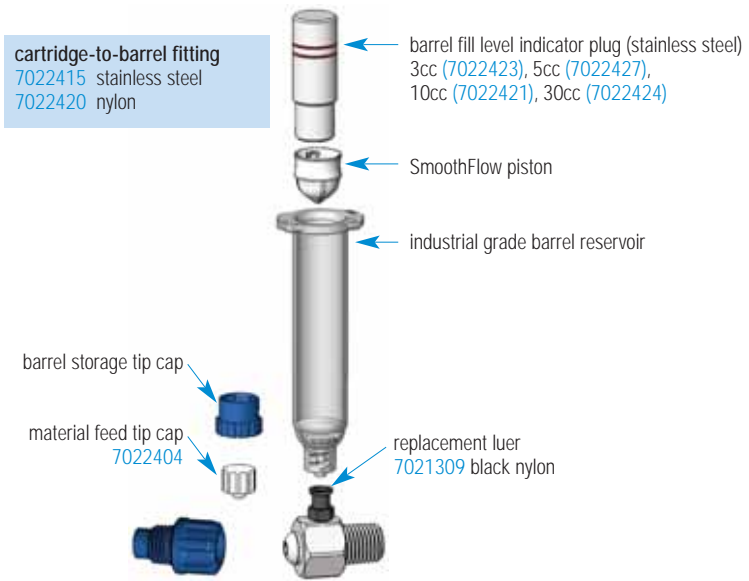
**Caution: Do not overtighten or you may strip the barrel fitting.**

3. Pull out the air pressure regulator knob until it clicks into the unlocked position. Turn clockwise to adjust the air pressure to 20 psi (1.4 bar). 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.



# Series Operation

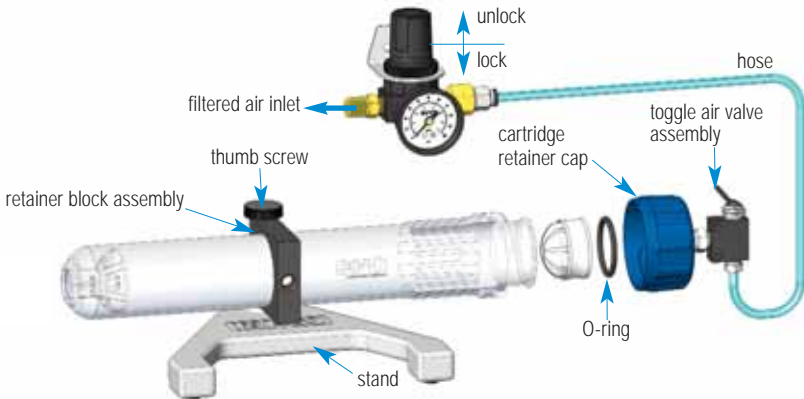
7022446 (2.5 oz), 7022447 (6 oz), 7022445 (12 oz), 7013568 (20 oz), & 7013901 (32 oz)



# Replacement Parts

7022446 (2.5 oz), 7022447 (6 oz), 7022445 (12 oz), 7013568 (20 oz), & 7013901 (32 oz)

| 7022446 (2.5 oz), 7022447 (6 oz), 7022445 (12 oz),<br>7013568 (20 oz), & 7013901 (32 oz) SERIES |  |
|---|--|
| Replacement Parts   |  |
| Part #  | Description                              |
| 7014866   | 100 psi (6.9 bar) air pressure gauge     |
| 7014875   | 100 psi (6.9 bar) air pressure regulator |
| 7002004   | hose 6mm OD tubing                       |
| 7018674   | stand                                    |
| 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 (2) 2.5/6/12 oz      |
| 7014372   | retainer cap o-ring (2) 20/32 oz         |
| 7022409   | retainer block assembly 2.5/6/12 oz      |
| 7013554   | retainer block assembly 20/32 oz         |



# ATLAS Barrel Filling Systems

7022452 (1/10 Gallon) Series

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.

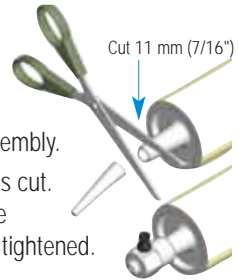
Nordson EFD barrel filling systems loader includes the stand with retainer block, 1/10 gallon (300 ml) retainer, cap and toggle air valve assembly, material feed tip cap, nozzle-to-barrel adapter, 100 psi (6.9 bar) air pressure regulator with gauge and mounting bracket, and (3) barrel fill level indicator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



# Series Setup

7022452 (1/10 Gallon)

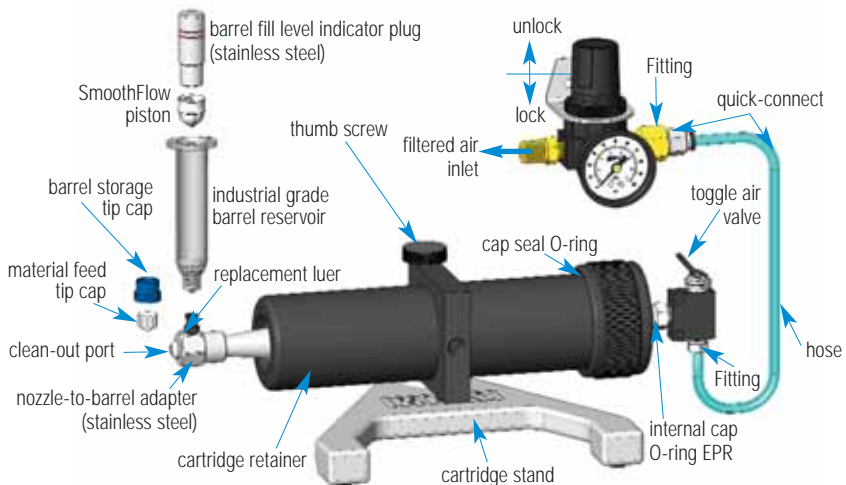
1. Install the 100 psi (6.9 bar) air pressure regulator assembly into a filtered air supply. Included with the regulator are fittings for plumbing the regulator into existing air lines. A wall-mounting bracket is also supplied.
2. Set the pressure to zero. Do not connect the air line from the barrel 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. 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.

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.

6. 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.



# Series Operation

7022452 (1/10 Gallon)

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.
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.  
**Caution: Do not overtighten or you may strip the nozzle-to-barrel adapter.**
3. Pull out the air regulator knob until it clicks into the unlocked position. Turn clockwise to adjust the air pressure to 20 psi (1.4 bar). 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.

# Replacement Parts

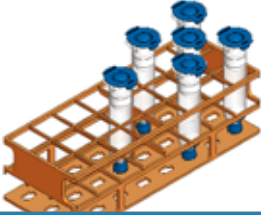
7022452 (1/10 Gallon)

| 7022452 (1/10 Gallon) SERIES |   |
|------------------------------|---|
| Replacement Parts            |   |
| Part #                       | Description   |
| 7014866                      | 100 psi (6.9 bar) air pressure gauge                    |
| 7014875                      | 100 psi (6.9 bar) air pressure regulator                |
| 7002004                      | hose 6mm OD tubing                                      |
| 7016795                      | Fitting - 1/8" NPT x 1/8" BARB - Nickel                 |
| 7014868                      | Fitting - 1/4 FPT x 1/8 MPT BR                          |
| 7022423                      | 3cc barrel fill level indicator plug (stainless steel)  |
| 7022427                      | 5cc barrel fill level indicator plug (stainless steel)  |
| 7022421                      | 10cc barrel fill level indicator plug (stainless steel) |
| 7022424                      | 30cc barrel fill level indicator plug (stainless steel) |
| 7022404                      | material feed tip cap                                   |
| 7021309                      | replacement luer black nylon                            |
| 7022440                      | nozzle-to-barrel adapter (stainless steel)              |
| 7018655                      | * cap seal O-ring Viton (brown)                         |
| 7018653                      | * cap seal O-ring EPR (black)                           |
| 7016635                      | Male quick-connect 3/32 ID Hose                         |
| 7016637                      | Male quick-connect 1/8 Barb Black                       |
| 7022414                      | toggle air valve  |
| 7018650                      | 1/10 gallon (300 ml) cartridge retainer                 |
| 7018674                      | Base  |
| 7022433                      | Retainer Block  |

\* **NOTE:** Keep internal cap O-ring lubricated with fluorocarbon gel

# Accessories

Consider ordering the barrel rack for convenient barrel storage.



| BARREL RACK       |   |
|-------------------|---|
| Replacement Parts |   |
| Part #            | Description                                 |
| 7022411           | Rack holds (72) 3cc and 5cc barrels         |
| 7022429           | Rack holds (24) 10cc, 30cc and 55cc barrels |

# Optimum® Component and Cartridge Systems

for use with ATLAS Barrel Loaders

## SYRINGE BARREL & PISTON SETS

Each box contains one resealable bag of syringes and SmoothFlow™ pistons. Dust-free packaging.

| Size | MOST FLUIDS<br>Clear Barrels<br>White Pistons | Light Block*<br>Amber Barrels<br>White Pistons | Opaque<br>Black Barrels<br>White Pistons | QTY  |
|------|---|--|--|------|
| 3cc  | 7012074                                       | 7012085  | 7012091                                  | (50) |
| 5cc  | 7012096                                       | 7012103  | 7012109                                  | (40) |
| 10cc | 7012114                                       | 7012126  | 7012130                                  | (30) |
| 30cc | 7012136                                       | 7012145  | 7012149                                  | (20) |
| 55cc | 7012153                                       | 7012160  | 7012164                                  | (15) |



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 tight seal.

| Size     | Blue    | QTY  |
|----------|---------|------|
| 3cc      | 7012190 | (50) |
| 5cc      | 7012192 | (40) |
| 10cc     | 7012194 | (30) |
| 30, 55cc | 7012196 | (20) |

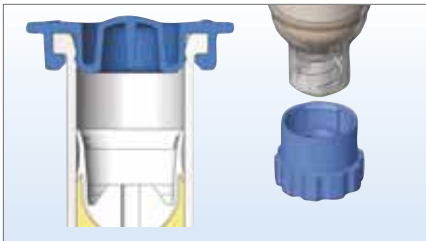
Threaded tip cap seals syringe barrel.

| One size | 7012198 | Blue | (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. Available in blue or green.





# Optimum® Component and Cartridge Systems

for use with ATLAS Barrel Loaders

## CARTRIDGES

### Clear Cartridges

| Part #  | Size              | Qty/Box |
|---------|-------------------|---------|
| 7012389 | 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 |
|---------|-------------------|---------|
| 7012390 | 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 |
|---------|-------------------|---------|
| 7012391 | 2.5 fl oz (75 ml) | 25      |
| 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

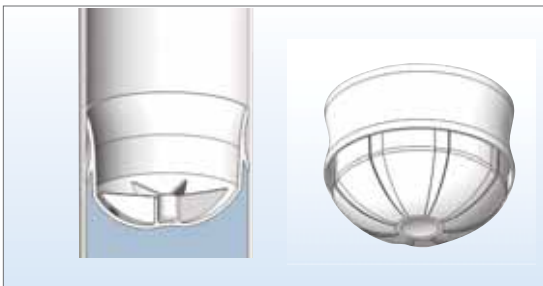
for use with ATLAS Barrel Loaders

## 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<br>(75, 180, 380 ml) | 25      |
| 7012421 | 20, 32 fl oz (600, 960 ml)            | 10      |
| Part #  | Size                                  | Qty/Box |
| 7012420 | 2.5, 6, 12 fl oz<br>(75, 180, 380 ml) | 250     |
| 7012422 | 20, 32 fl oz (600, 960 ml)            | 100     |



# Optimum® Component and Cartridge Systems

for use with ATLAS Barrel Loaders

## 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<br>(75, 180, 380 ml) | Blue  | 25      |
| 7012425  | 20, 32 fl oz (600, 960 ml)            | Blue  | 10      |
| 7012424  | 2.5, 6, 12 fl oz<br>(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     |



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