Flow-Rite® Exact Ink Dispensing Cartridge

Sonoco's Flow-Rite® Exact ink dispensing cartridge is engineered to perform in the technotrans Ink Line System, yet works equally well with smaller diameter hand-held devices such as the Sonoco ReadyFlow® dispenser.

This smaller design brings all of the storage and dispensing convenience and performance of the original Flow-Rite ink dispensing cartridge and incorporates a new, patent-pending valve design that allows for greater ink flow control and minimizes the effects of dried ink on the nozzle. The improved plunger design allows for easier air displacement during plunger insertion so inks stay fresher longer. High performance barrier liners are especially effective with fast drying inks. Like the original Flow-Rite ink dispensing cartridge, there is more usable ink, less waste, and significant cost advantages when using this high performance cartridge in automatic and hand-held dispensing systems.

Specifications

Outside diameter:	3.9 in/99mm
Height:	14.73 in/374 mm
Capacity:	68 oz/2000 ml
Ink capacity:	4.4 lbs/2kg*
Purge residual:	< 2%
Compatible with:	Automatic ink systems (technotrans), Sonoco ReadyFlow dispensers and other hand-held devices

* Depending on ink density

Designed for use with automated ink systems and hand-held dispensers.

Ask about Sonoco ReadyFlow hand-held dispensers.
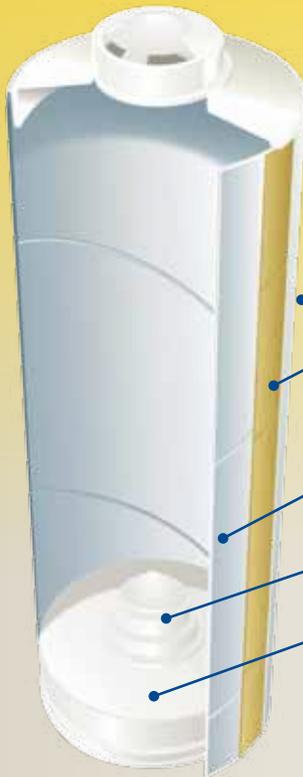
SONOCO READYFLOW® DISPENSER

Flow-Rite® Exact Ink Dispensing Cartridge

Sonoco's advanced composite body technology, patented plastic spout and plunger designs, and patented sealing process results in the Flow-Rite® Exact ink dispensing cartridge, a truly airtight ink storage and dispensing solution.

End base cap

- Flat End Cap design allows for easy automated and manual filling and storage in the nozzle-down position.
- Textured ribs allow for easy cap removal, even with wet hands.
- Ribbed base cap design protects the dispensing nozzle during shipment, even when dropped.
- Primary and secondary seals within the cap prevent leakage, even when shipping and storing the thinnest inks.

Self-closing nozzle

- Improves ink shut-off.
- Minimizes the effects of dried ink in the valve area.
- Simplified design improves performance and reliability.

Cartridge

- The multiple layer composite construction increases performance:
  - **Label –** Provides clean appearance with an ink-resistant coating that can be wiped clean. For large orders label can be printed.
  - **Body –** Made of 100% recycled paperboard, the cartridge's body is both strong and durable, ensuring the cartridge retains its shape and optimizes performance during dispensing, shipping and storage.
  - **Liner –** The double-layer liner includes a polymer-based layer that allows the plunger to slide easily inside the cartridge. A foil layer protects the ink from moisture and oxidation, thus increasing the shelf life of the ink, whether the cartridge is full or partially empty.
- The unique patent-pending shape and textured design of the plunger displaces unwanted air. Stackable design for automatic systems.
- Transparent plunger allows user to see if all air has been removed after filling. Available in a solid color to protect UV inks.

For more information contact Ben Gore: benny.gore@sonoco.com.

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Sonoco Plunger Inserter for Flow-Rite® Cartridges

Specifications/Features

Part Number: MS00000265

Compatible with: 5 and 8 lb original cartridges

5 and 8 lb Crown cartridges

4.4 lb Exact cartridges

- All-metal construction for durability and easy cleanup
- All pneumatic—all you need is compressed air

First introduced in 1999, Sonoco's Flow-Rite® ink dispensing cartridge has revolutionized the printing industry, creating a new standard for the storage and dispensing of ink. The Sonoco Plunger Inserter is the ideal product to use plungers and to purge air from your Flow-Rite cartridges.

The plunger inserter works with all Sonoco ink cartridges including the larger 5- and 8-pound Flow-Rite original and Crown cartridges as well as smaller 4.4-pound Flow-Rite Exact cartridges. Changing from large to small cartridge size is as simple as screwing on a plunger holder and flipping in two spacer bars. An adjustable timer allows you to continue filling the next cartridge while the plunger is being inserted. The machine is also equipped with a two-handed activation feature and a convenient stop button on the front for added operator safety.

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Filling, Storing and Using Flow-Rite® Cartridges

Cartridge arrival

Flow-Rite® ink cartridges are packed with the dispensing end facing the top of the box. Be sure to open the box with the Sonoco address in the upright position in order to keep debris created by vibration during shipment from entering the cartridges.

Store cartridges in a dry environment. Once cartridges are wet, performance is decreased.

Filling cartridges

For optimum shelf life, it is important that the plunger be installed below the flanged area at the end of the cartridge and the inside top of the cartridge walls be kept free from ink. When filling cartridges from a rolling mill, cut off the flow from the delivery tray prior to removing the cartridge. Flow-Rite original and Crown cartridges can be filled up to 2 inches from the top of the cartridge.

The Exact cartridge can be filled with ink up to 2-1/2 inches from the top. This will allow a space of at least 1/4-inch from the top of the plunger to the top flanged area of the cartridge.

Keep surface free from ink

Exact cartridge: 2.5″ from top

Original and Crown: 2″ from top

Original and Crown Flow-Rite cartridges

For the original and Crown Flow-Rite cartridges only, an air vent strip can be used to assist with the removal of air between the plunger and ink when sealing the plunger at the top of the cartridge. Use a smooth, soft plastic insert strip that is less than 3/64-inch (1.15-mm) thick, 3/16-inch (4.67-mm) wide or less and around 3.75 inches (95-mm) long. A good air vent strips is the Ty-Rap made by Thomas & Betts (catalog number TY523MX). These are smooth, European style cable ties. Also, string trimmer plastic cord with a diameter of 0.065-inch or smaller is acceptable. Remember, it does not take much to let air out during plunger insertion, but you must use something soft and plastic that will not damage or deform the plunger and/or cartridge.

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® Ty-Rap is a registered trademark of Thomas & Betts Corporation.

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Flow-Rite® Cartridge Plunger Insertion Instructions

Exact cartridge plunger insertion

Inserting the plunger into the Exact cartridge requires a different technique than the original and Crown cartridges. **Using a vent strip is not recommended!** The ink cartridges have a built-in self-venting feature. Please keep ink off cartridge sides for maximum performance. For the Exact cartridge, it is important to remove all air uniformly under the plunger. This requires 125 pounds of force and takes about 25 seconds. Using the

Sonoco pneumatic plunger inserter, this is achieved with a 2-inch air cylinder and 40 psi.

If another style pneumatic plunger inserter is used, measure the diameter of the air cylinder to determine the pressure needed to get 125 pounds of force.

Ink cartridge storage tips

- Store filled Sonoco ink cartridges on their dispensing end
- Rotate stock, using the oldest cartridges first
- Protect the flanged/plunger end of the cartridge during storage and transportation

Cylinder diameter (in)	Air pressure (PSI)
1	159
1.5	71 – Sentinel® unit
2	40 – Sonoco unit
2.5	26

Using the Sonoco pneumatic plunger inserter

1. Place the plunger on the plunger holder.
2. Place the filled ink cartridge against the vertical supports.
3. Using two hands, simultaneously press the green buttons on either side of the unit. The plunger will go down into the cartridge. The plunger plate will retract after the timer has timed out (15 – 30 second).

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