SampleLock Syringe

Congratulations! You have purchased the finest quality precision syringe available today. We combine top quality materials with skilled workmanship, ensuring the highest possible performance level of every precision fluid device we manufacture. With proper care and handling, SampleLock syringes will provide unsurpassed performance in precision liquid handling year after year.

Syringes and needles manufactured by Hamilton Company are intended for scientific research and laboratory use only and are not intended for human *in vivo* use.

Hamilton SampleLock syringes combine the quality of the world-renowned Hamilton Gastight® syringe with an easy-to-use twist valve. For prolonged syringe life and to obtain the maximum benefits of use, a few helpful tips should be observed:

Assured Accuracy and Precision

- When initially inserting a new plunger into a SampleLock syringe barrel, wet (lubricate) the tip with deionized water or another solvent compatible with the sample.
- When using a SampleLock syringe, grasp only the syringe flange and plunger button. By doing so, variations in fluid measurement due to body heat are avoided.
- Pump the plunger with the syringe needle immersed in the liquid or gas to be transferred. This will expel any trapped air in the needle and syringe, and provide sufficient lubrication to the plunger in the case of liquids. For extended plunger tip life, minimize the use of a “dry” syringe.
- Every SampleLock syringe is handcrafted to insure only the highest precision liquid and gas transfers. Barrels and plunger assemblies within a given volume range are interchangeable and may be purchased separately for field repair and replacement.
- If the plunger is accidently withdrawn completely from the syringe barrel, wipe it carefully with a lint-free tissue and re-wet it before reinserting into the barrel. Be careful with the plunger tip since any physical abrasions, scratches or oil from one’s fingers may cause the plunger to leak once re-assembled.

Cleaning

- The life of your SampleLock syringe is directly related to its cleanliness!
- To clean syringes, it is best to use solvents known to be effective in solvating the sample and preferably that are non-alkaline and non-phosphate. A biodegradable, non-phosphate, organic Cleaning Solution Concentrate is available from Hamilton; order part number 18311.
- High-quality water and acetone prove to be good rinses.
- To clean the plunger, remove it from the syringe barrel and gently wipe with a lint-free tissue. Reinsert the plunger into the barrel and pump deionized water or acetone through the needle and syringe. Air dry the syringe for storage.

Solvent Compatibility

Some solvents may attack and deteriorate the highly resistive adhesives (cements) used to affix the valves in SampleLock syringes. Avoid prolonged immersion of the syringe while cleaning. Rinse the syringe thoroughly after use with deionized water, acetone or another solvent compatible with the sample. Allow to air dry.

Greyhound CHROMATOGRAPHY AND ALLIED CHEMICALS

HAMILTON®

Assembly

1. Wet the plunger tip with deionized water or a solvent compatible with the sample.
2. Insert the plunger, white plunger tip first, into the syringe barrel. The threaded plunger screw should already be on the plunger shaft, above the plunger tip (Figure 2).
3. Depress the plunger until plunger tip bottoms out. Plunger will bottom out at the beginning of the syringe scale.
4. Thread the plunger screw into the top of the syringe barrel and tighten finger tight — do not use any tools to tighten the plunger screw.
5. Attach the needle assembly or adapter.
6. Your SampleLock syringe is ready for use.

Figure 1: Series 1705 and 1701 Style SampleLock Syringes

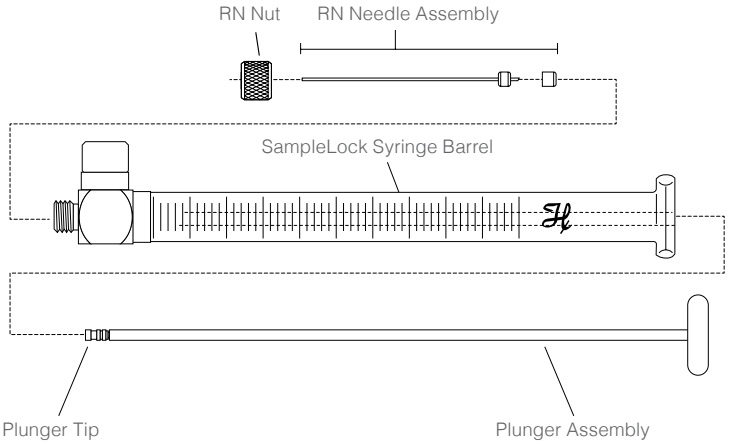
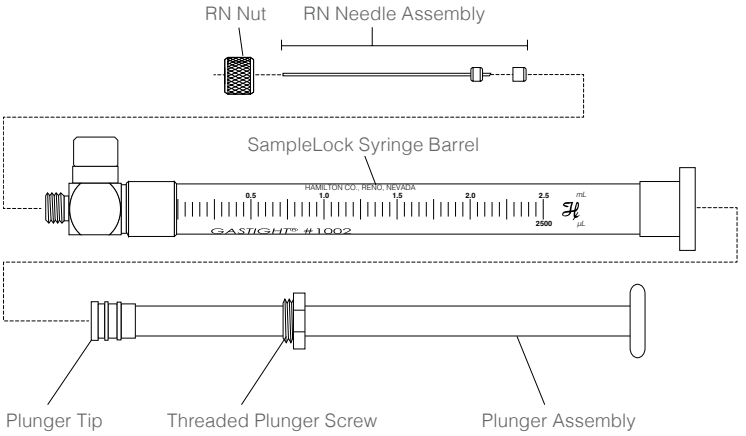


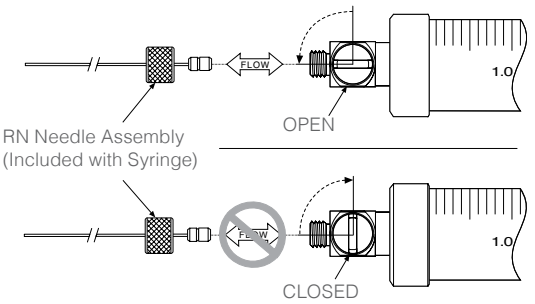
Figure 2: Series 1725 through 1100 Style SampleLock Syringes



Valve Operation

Open the SampleLock valve by turning the cap so it is in line with the fluid path (Figure 3). Close the valve by turning the cap perpendicular to the fluid path. You can tell at a glance whether the valve is open or closed, thus avoid sample handling errors.

Figure 3: SampleLock Valve Operation

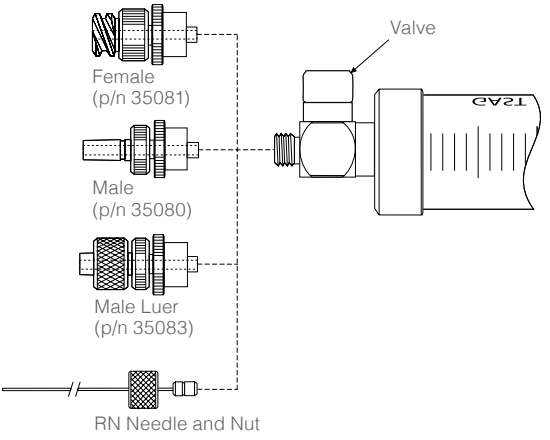


Adapters

Male and female luer adapters thread onto the SampleLock valve making the syringe compatible with a multitude of connectors and fittings (Figure 4). All adapters have a Kel-F (CTFE) fluid path, with a port diameter of 0.039 inches (0.991 mm).

Connect a female luer adapter to a 3-way tee or 4-way cross for a multi-port aspirating or dispensing. Connect the female luer adapter to threaded fittings in sizes from 8-32 UNC to 1/4”-NPT. Use a male luer or luer lock adapter to attach metal hub (N) or Kel-F hub (KF) needles from 10 to 33 gauge. Connect either single and double Kel-F hub PTFE tubing assemblies from 1/8” to 30 gauge. Threaded fittings in sizes from 8-32 UNC to 5/16-18 UNC can also be configured.

Figure 4: SampleLock Syringe Adapters



Applications

Sample Collection and Storage

Collect, store, transport and analyze your samples with the SampleLock syringe. SampleLock syringes have been carefully engineered to prevent evaporative loss of volatile samples, protect reactive samples from moisture or the atmosphere and prevent loss of headspace samples when collecting them from Tedlar™ bags or gas sampling tubes.

Sample Pre-Pressurization

Obtain reproducible results during GC quantitation of gaseous samples by pressurizing the syringe contents prior to injection.

1. With the SampleLock valve closed, depress the syringe plunger and hold it in position.
2. Insert the needle into the injection valve, and open the SampleLock valve while depressing the plunger to release the sample onto the head of the column.

This technique produces a positive injection pressure over the column inlet, prevents sample loss from blowback, and ensures a tighter sample plug. Please exercise care when pre-pressurizing small volume SampleLock syringes as it is easy to develop pressures in excess of 250 psig, which may cause the valve to leak.

Sample Spiking

Internal standards can be added to a sample collected in a SampleLock syringe. All SampleLock valves have a 0.026 inch (0.660 mm) valve port. The needle of a secondary syringe (such as a 701N, 10µL syringe) can be slipped through the valve and into the barrel of the SampleLock syringe.

1. Fill a secondary syringe with the internal standard.
2. Insert the secondary syringe's needle through the SampleLock valve into the SampleLock syringe.
3. Inject the standard and remove the secondary syringe.
4. Close the SampleLock valve to maintain sample integrity.

Warranty Statement

Hamilton Company unconditionally guarantees its products to be free of defects in materials and workmanship. Any product that fails due to such a defect will be repaired or replaced at our discretion without cost, provided the device is returned on a Return Materials Authorization (RMA). It is the responsibility of the purchaser to determine the suitability of application and material compatibility of the products based on the published specifications of the products.

Return of Goods

Hamilton Company's return and repair policy is written to protect its employees from potentially hazardous materials (e.g., serum, radioactive materials, carcinogenic chemicals, etc.) or any substance that may cause them partial or permanent disability during the inspection or repair process. In returning a product, the customer acknowledges that the product is free from any hazardous materials. Furthermore, the customer assumes responsibility should the returned product be determined to be hazardous.

Lit. No. 1248-01 Rev D — 08/2014

HAMILTON®

Distributed By

Greyhound CHROMATOGRAPHY

Greyhound Chromatography and Allied Chemicals
6 Kelvin Park
Birkenhead
Merseyside, CH41 1LT

Tel: 0151 649 4000 Fax: 0151 649 4001
Email: info@greyhoundchrom.com
Web: https://www.greyhoundchrom.com