

Non-contaminating, chemically inert, EPA recommended

These gas sampling bags offer a convenient, reliable, economical way of collecting airborne chemical hazards. They are chemically inert, leak tested, mechanically strong, reusable, and non-contaminating. Gas Sampling Bags are available in *ALTEF*, Tedlar®, Charcoal Tedlar®, FEP, PFA and other materials, with a variety of standard and custom fittings as well as optional metal eyelets for easy holding and storage.

Common applications

- Assessing exposure from spills and leaks
- Biogas and landfill sampling
- Calibrating Gas Standards
- Gas Blending
- Grab Sampling
- Magnetic Imaging
- Groundwater Testing
- Measuring Peak Concentrations
- Indoor Air Sampling
- Vent Sampling
- Soil Gas Sampling
- Hazardous Waste Site Sampling

Tedlar® Bags

Tedlar® film has very low gas permeation levels and high tensile strength. Bags resist puncture in the field. 2 mil Tedlar® film is an economical alternative to FEP bags. Tedlar® is much less permeable than FEP and is unaffected by the chemical components of gases generally sampled, like carbon monoxide, sulfur dioxide, hydrogen sulfide, radon and mercaptans. Continuous use temperature from -98° to 400°F (temperature limit depends on fittings used). Required for many EPA testing methods.

ALTEF Bags

ALTEF is a proprietary fluoropolymer film developed specially for the air sampling market. *ALTEF* has many of the desired characteristics of Tedlar® at a significantly lower cost. *ALTEF is not recommended for ketones or esters in high concentrations (>30%) and is not suitable for storing H₂S. Our Multi-Layer Foil bags are the best choice for collecting and storing H₂S.*

Multi-Layer Foil Bags

Multi-Layer Foil bags are ideal for sampling and storing H₂S, and for low molecular weight compounds such as Methane, CO/CO₂, Hydrogen, and inert gases which are not stable in Tedlar®, *ALTEF*, or FEP. Water and vapor proof, these flexible bags protect light sensitive compounds. Bags are available in standard capacities of 1, 2, 3, 5, 10, 12, 25, and 40 liter capacities, with several fitting and valve options. They provide up to 5 day sample stability with minimal adsorption. Custom sizes available.

FEP Bags

FEP is one of the most chemically inert materials for making gas sampling bags. It works well in extreme temperatures ranging from -400° to 400°F; allowing it to be used in most stack sampling conditions. 5 mil FEP film is completely resistant to the most severe corrosives. Relatively low permeability results in minimal sample loss. FEP bags can be specified for applications involving rough handling.

Choice of Fittings and Valves

Standard valves and fittings offered are: Polypropylene Screw Cap Combo Valve, Polypropylene Locking Combo Valve®, Nickel Plated HR® Barbed Valve, Jaco® Plastic Fitting for Tubing or Septum, Stainless Steel Combo Valve, TCLP Stainless Steel Septum fitting, Stainless Steel Swagelok® type fitting and PFA fitting.



STANDARD SIZES			
SIZE/ INCHES	CAPACITY/ LITERS	SIZE/ INCHES	CAPACITY/ LITERS
6 x 6	0.6	12 x 21	12.0
7 x 7	1.0	18 x 18	16.0
6 x 10	1.2	18 x 24	25.0
6 x 12	1.5	24 x 24	40.0
9 x 9	2.0	24 x 30	56.0
10 x 10	3.0	24 x 36	73.0
12 x 12	5.0	30 x 30	80.0
12 x 19	10.0	30 x 36	100.0

CUSTOM SIZES AVAILABLE

Tedlar® is a registered trademark of E.I DuPont

Locking Combo® is a registered trademark of Jensen Inert Products Inc.

Swagelok® is a registered trademark of Swagelok Inc.

Jaco® is a registered trademark of Jaco Manufacturing Inc.

HR® is a registered trademark of Halkey Roberts Inc.

Non-contaminating, chemically inert, EPA recommended

Re-using bags

The EPA does not recommend reusing sample bags for ambient air sampling, due to the possibility of adsorption of previously sampled chemicals onto the inside bag surface. In some cases, bags can be reused, with the following guidelines.

- Immediately after use, clean bags by flushing and heating, then store with all air evacuated from the bag.
- Long-term storage of air-contaminant mixtures in bags can cause subsequent samples to be contaminated by off-gassing of previous samples adsorbed into the film.
- Tedlar® bags can be used for higher MW alcohols without contaminating subsequent samples if cleaned and flushed properly.
- Properly cleaned bags can be reused for sampling ethers without interfering with subsequent analysis.
- Tedlar® bags used for sampling styrene or ethyl benzene cannot be reused. Cleaning and flushing will not completely remove these chemicals.

Hints

- Before use, thoroughly flush bags with purified air or nitrogen.
- During sampling, Fluoropolymer tubing and Fluoropolymer faced septums must be used in order to prevent sample loss.
- Bags should not be filled to more than 80% of their maximum volume.
- Charcoal (Black) Tedlar® bags should be used when sampling any light sensitive elements.
- Do not store compounds in Tedlar® bags long term due to the possibility that chemicals may adsorb onto the bag surface.
- Bags should not be used to collect reactive or unstable compounds.
- When shipping bags, do not air-ship unless the cabin is pressurized.

Tedlar® is a registered trademark of E.I DuPont
 Locking Combo® is a registered trademark of Jensen Inert Products Inc.
 Swagelok® is a registered trademark of Swagelok Inc.
 Jaco® is a registered trademark of Jaco Manufacturing Inc.
 HR® is a registered trademark of Halkey Roberts Inc.

Available Valves and Fittings



Polypropylene Screw Cap Combo Valve with Replaceable Septum



Polypropylene Locking Combo Valve with Septum



Stainless Steel TCLP Fitting with Replaceable Septum



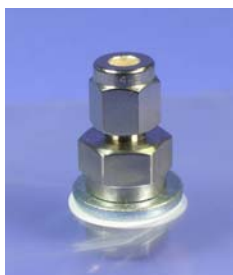
Stainless Steel Combo Valve with Replaceable Septum



Plastic Jaco Fitting for Tubing or Septum



Nickel Plated HR Barbed On/Off Valve



Swagelok type Stainless Steel Fitting for Tubing or Septum



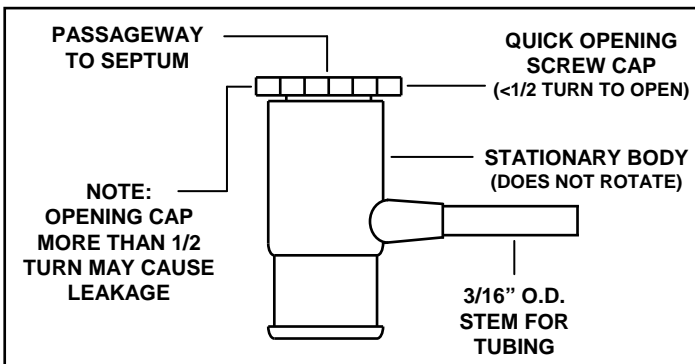
PFA Fitting for Tubing or Septum

f.v.j;t.g.b;ip
 Effective 12/2010



TEDLAR[®] GAS SAMPLING BAGS WITH

SCREW CAP COMBO VALVE WITH SEPTUM



CATALOG NO.	SIZE INCHES	CAPACITY LITERS	PRICE/BAG
GSTP000-0606S	6 X 6	0.6	
GSTP001-0707S	7 X 7	1.0	
GSTP000-0610S	6 X 10	1.2	
GSTP002-0909S	9 X 9	2.0	
GSTP003-1010S	10 X 10	3.0	
GSTP003-0912S	9 X 12	3.0	
GSTP005-1212S	12 X 12	5.0	
GSTP008-1217S	12 X 17	8.0	
GSTP009-1218S	12 X 18	9.5	
GSTP010-1219S	12 X 19	10.0	
GSTP025-1824S	18 X 24	25.0	

Custom sizes, Stainless Steel Valves, Swagelok[®] type, Polypropylene Combo Valves, TCLP, Barbed and other fittings available

Tubing available, call for pricing

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© SWAGELOK: reg. trademark of Swagelok Inc.

Valve is inert, industry standard polypropylene
Valve Stem is 3/16" diameter

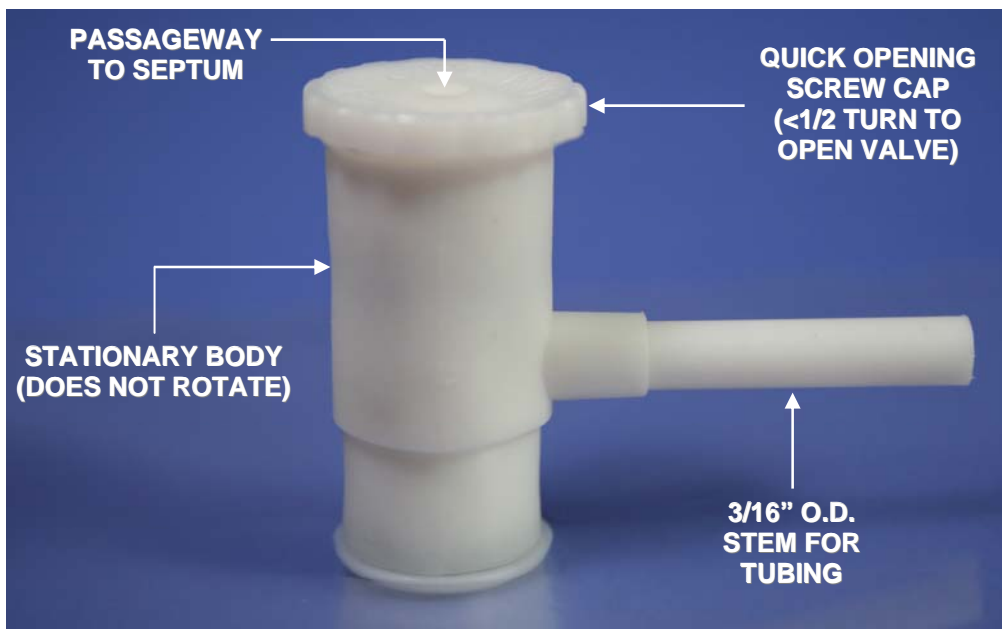
Catalog No. SEP5007-SCV-10, Replacement Septa,
pk/10



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OPERATING INSTRUCTIONS

SCREW CAP COMBO VALVE



NOTE: VALVE BODY IS STATIONARY AND DOES NOT ROTATE. ONLY THE CAP TURNS.

TO OPEN VALVE: Use quick opening Screw Cap. Turn cap counter-clockwise less than 1/2 turn (Figure 1). Note: Opening cap more than 1/2 turn may result in leakage.

TO CONNECT TUBING: Push tubing over end of stem (Figure 2).

TO CLOSE VALVE: Turn cap clockwise until it stops (Figure 3).

TO TAKE A SYRINGE SAMPLE: Pierce septum and insert needle approx 3/4" into valve (Figure 4).

TO REPLACE SEPTUM: Remove screw cap from valve body. Insert a thin, unsharpened rod (I.E. a paper clip) into passageway and push out the orange-colored septum (Figure 5). Insert new septum into the valve cap with the shiny side facing the bag (Figure 6).



FIG. 1 VALVE OPEN



FIG. 2 TUBING CONNECTED



FIG. 3 VALVE CLOSED



FIG. 4 SYRINGE NEEDLE IN PASSAGEWAY



FIG. 5 REMOVING SEPTUM

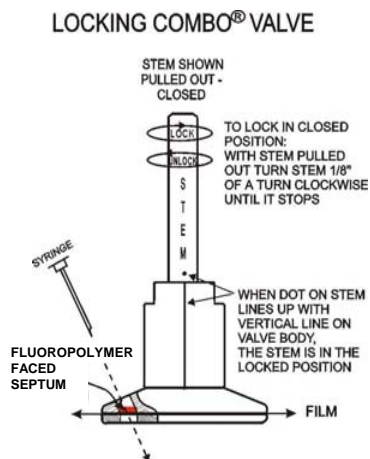


FIG. 6 INSERTING NEW SEPTUM



TEDLAR[®] GAS SAMPLING BAGS WITH

LOCKING COMBO VALVE[®] WITH SEPTUM



CATALOG NO.	SIZE INCHES	CAPACITY LITERS	PRICE/BAG
GSTP000-0606	6 X 6	0.6	
GSTP001-0707	7 X 7	1.0	
GSTP000-0610	6 X 10	1.2	
GSTP002-0909	9 X 9	2.0	
GSTP003-1010	10 X 10	3.0	
GSTP003-0912	9 X 12	3.0	
GSTP005-1212	12 X 12	5.0	
GSTP008-1217	12 X 17	8.0	
GSTP009-1218	12 X 18	9.5	
GSTP010-1219	12 X 19	10.0	
GSTP025-1824	18 X 24	25.0	

Custom sizes, Stainless Steel Valves, Swagelok[®] type, Polypropylene Combo Valves, TCLP, Barbed and other fittings available

Valve is inert, industry standard polypropylene
Valve Stem is 3/16" diameter

Tubing available, call for pricing

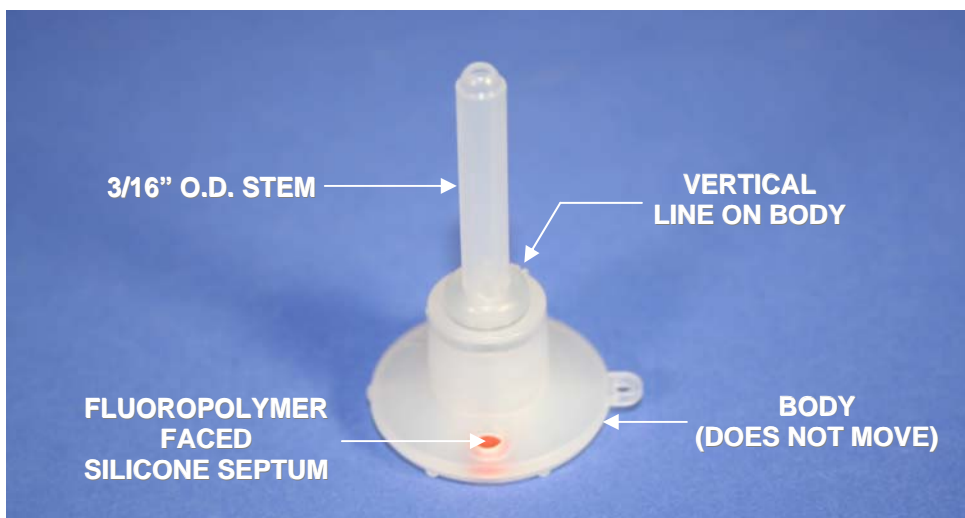
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OPERATING INSTRUCTIONS

LOCKING COMBO VALVE



TO OPEN VALVE: Push stem down toward the bag. The valve is now OPEN. (Figure 1). Bags are supplied with the stem in the CLOSED (up) and UNLOCKED position.

TO CLOSE VALVE: Pull stem outward (up) until it stops. Stem will remain in the closed position unless force is applied to push the stem in. The valve is now CLOSED and NOT LOCKED. (Figure 2).

TO LOCK VALVE: With stem pulled out, rotate it clockwise until it stops (about 1/8 of a turn). When locked, a vertical line on the valve body aligns with a dot on the stem. The stem is now locked in its CLOSED position and can not be pushed downward. This prevents accidental sample loss during shipment. (Figure 3).

TO UNLOCK VALVE: Turn stem counterclockwise about 1/8 of a turn until it stops. The stem can now be pushed in, opening the valve. (Figure 2)

TO CONNECT TUBING: Push 3/16" or 1/8" I.D. tubing over end of stem approximately 1/8" to 1/4". (Figure 4).

TO DISCONNECT TUBING: Pull tubing outward off the stem, or cut off tubing just above the stem.

TO TAKE A SYRINGE SAMPLE: Insert needle through orange septum in small hole in valve base. Take care not to puncture the opposite wall of the bag when inserting the needle. (Figure 5).



FIG. 1 VALVE OPEN



FIG. 2 VALVE CLOSED NOT LOCKED



FIG. 3 VALVE CLOSED AND LOCKED

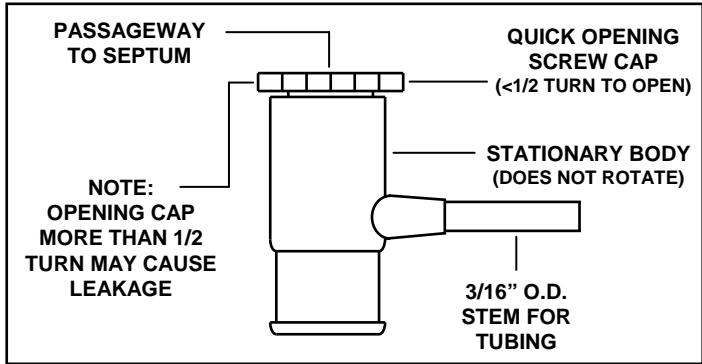


FIG. 5 SYRINGE NEEDLE



FEP GAS SAMPLING BAGS WITH

SCREW CAP COMBO VALVE WITH SEPTUM



CATALOG NO.	SIZE INCHES	CAPACITY LITERS	BAGS/ PACK	PRICE/ BAG
GSF001P-0606S	6 X 6	0.6	10	
GSF001P-0707S	7 X 7	1.0	10	
GSF001P-0610S	6 X 10	1.2	10	
GSF001P-0612S	6 X 12	1.5	10	
GSF001P-0909S	9 X 9	2.0	10	
GSF001P-1010S	10 X 10	3.0	10	
GSF001P-1212S	12 X 12	5.0	10	
GSF001P-1218S	12 X 18	9.5	5	
GSF001P-1219S	12 X 19	10.0	5	
GSF001P-1818S	18 X 18	16.0	3	
GSF001P-1824S	18 X 24	25.0	1	
GSF001P-2424S	24 X 24	40.0	1	
GSF001P-2430S	24 X 30	56.0	1	
GSF001P-2436S	24 X 36	73.0	1	
GSF001P-3030S	30 X 30	80.0	1	

Custom sizes, Stainless Steel Valves, Swagelok® type, Polypropylene Combo Valves, TCLP, Barbed and other fittings available

Tubing available, call for pricing

© SWAGELOK: reg. trademark of Swagelok Inc.

Valve is inert, industry standard polypropylene
Valve Stem is 3/16" diameter

Catalog No. SEP5007-SCV-10, Replacement Septa, pk/10



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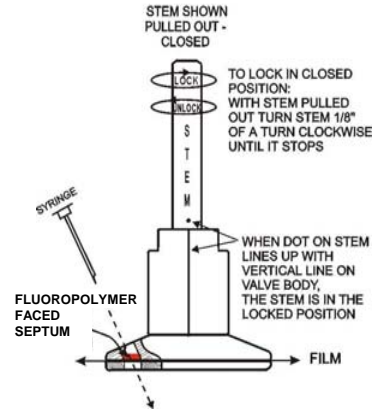


FEP GAS SAMPLING BAGS WITH

LOCKING COMBO VALVE[®] WITH SEPTUM



LOCKING COMBO[®] VALVE



CATALOG NO.	SIZE INCHES	CAPACITY LITERS	BAGS/ PACK	PRICE/ BAG
GSF001P-0606	6 X 6	0.6	10	
GSF001P-0707	7 X 7	1.0	10	
GSF001P-0610	6 X 10	1.2	10	
GSF001P-0612	6 X 12	1.5	10	
GSF001P-0909	9 X 9	2.0	10	
GSF001P-1010	10 X 10	3.0	10	
GSF001P-1212	12 X 12	5.0	10	
GSF001P-1218	12 X 18	9.5	5	
GSF001P-1219	12 X 19	10.0	5	
GSF001P-1818	18 X 18	16.0	3	
GSF001P-1824	18 X 24	25.0	1	
GSF001P-2424	24 X 24	40.0	1	
GSF001P-2430	24 X 30	56.0	1	
GSF001P-2436	24 X 36	73.0	1	
GSF001P-3030	30 X 30	80.0	1	

Custom sizes, Stainless Steel Valves, Swagelok[®] type, Polypropylene Combo Valves, TCLP, Barbed and other fittings available

Valve is inert, industry standard polypropylene
Valve Stem is 3/16" diameter

Tubing available, call for pricing

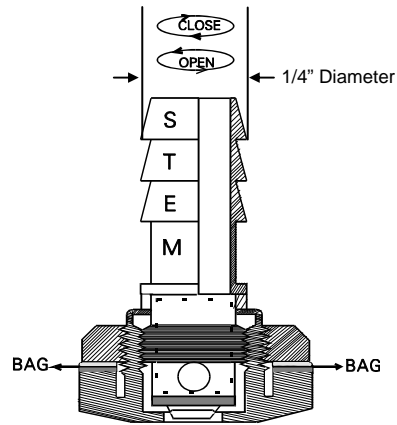
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® SWAGELOK: reg. trademark of Swagelok Inc.





FEP GAS SAMPLING BAGS WITH

**ON/OFF VALVE, NICKEL PLATED HR[®],
WITH 1/4" DIAMETER BARBED STEM**



CATALOG NO.	SIZE INCHES	CAPACITY LITERS	BAGS/ PACK	PRICE/ BAG
GSF1000-0606	6 X 6	0.6	10	
GSF1000-0707	7 X 7	1.0	10	
GSF1000-0610	6 X 10	1.2	10	
GSF1000-0612	6 X 12	1.5	10	
GSF1000-0909	9 X 9	2.0	10	
GSF1000-1010	10 X 10	3.0	10	
GSF1000-1212	12 X 12	5.0	10	
GSF1000-1218	12 X 18	9.5	5	
GSF1000-1219	12 X 19	10.0	5	
GSF1000-1818	18 X 18	16.0	3	
GSF1000-1824	18 X 24	25.0	1	
GSF1000-2424	24 X 24	40.0	1	
GSF1000-2430	24 X 30	56.0	1	
GSF1000-2436	24 X 36	73.0	1	
GSF1000-3030	30 X 30	80.0	1	

Custom sizes, Stainless Steel Valves, Swagelok[®] type, Polypropylene Combo Valves, TCLP, Barbed and other fittings available

Barbed Stem is 1/4" diameter
Use 3/16" ID tubing on barbed stem

Tubing available, call for pricing

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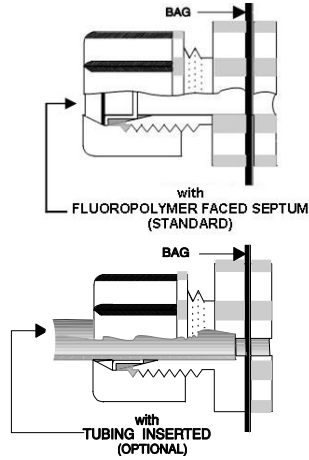


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**FEP GAS SAMPLING BAGS
WITH**

**PLASTIC JACO® FITTING
WITH FLUOROPOLYMER FACED SEPTUM**



CATALOG NO.	SIZE INCHES	CAPACITY LITERS	BAGS/ PACK	PRICE/ BAG
GSF001S-0606	6 X 6	0.6	10	
GSF001S-0707	7 X 7	1.0	10	
GSF001S-0610	6 X 10	1.2	10	
GSF001S-0612	6 X 12	1.5	10	
GSF001S-0909	9 X 9	2.0	10	
GSF001S-1010	10 X 10	3.0	10	
GSF001S-1212	12 X 12	5.0	10	
GSF001S-1218	12 X 18	9.5	5	
GSF001S-1219	12 X 19	10.0	5	
GSF001S-1818	18 X 18	16.0	3	
GSF001S-1824	18 X 24	25.0	1	
GSF001S-2424	24 X 24	40.0	1	
GSF001S-2430	24 X 30	56.0	1	
GSF001S-2436	24 X 36	73.0	1	
GSF001S-3030	30 X 30	80.0	1	

Custom sizes, Stainless Steel Valves, Swagelok® type, Polypropylene Combo Valves, TCLP, Barbed and other fittings available

Tubing available, call for pricing

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Use 1/4" OD tubing

Catalog No. SEP5007-JSF-10, Replacement Septa, pk/10

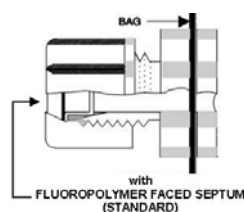
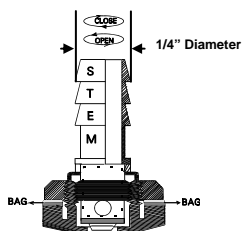
Catalog No. CAP-14-JT, Extra Cap for tubing with Ferrule and Gripper,





**FEP GAS SAMPLING BAGS
WITH**

ON/OFF VALVE, NICKEL PLATED HR[®], WITH 1/4" DIAMETER BARBED STEM & SEPARATE PLASTIC JACO[®] FITTING WITH FLUOROPOLYMER FACED SEPTUM



CATALOG NO.	SIZE INCHES	CAPACITY LITERS	BAGS/ PACK	PRICE/ BAG
GSF101S-0606	6 X 6	0.6	10	
GSF101S-0707	7 X 7	1.0	10	
GSF101S-0610	6 X 10	1.2	10	
GSF101S-0612	6 X 12	1.5	10	
GSF101S-0909	9 X 9	2.0	10	
GSF101S-1010	10 X 10	3.0	10	
GSF101S-1212	12 X 12	5.0	10	
GSF101S-1218	12 X 18	9.5	5	
GSF101S-1219	12 X 19	10.0	5	
GSF101S-1818	18 X 18	16.0	3	
GSF101S-1824	18 X 24	25.0	1	
GSF101S-2424	24 X 24	40.0	1	
GSF101S-2430	24 X 30	56.0	1	
GSF101S-2436	24 X 36	73.0	1	
GSF101S-3030	30 X 30	80.0	1	

Custom sizes, Stainless Steel Valves, Swagelok[®] type, Polypropylene Combo Valves, TCLP, Barbed and other fittings available

Use 3/16" ID tubing on 1/4" diameter Barbed Stem
Use 1/4" OD tubing on JACO[®]

Tubing available, call for pricing

Catalog No. SEP5007-JSF-10, Replacement Septa, pk/10

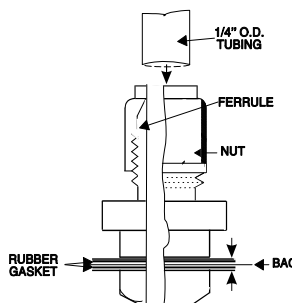
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- © JACO: reg. trademark of Jaco Manufacturing Inc.
- © SWAGELOK: reg. trademark of Swagelok Inc.

Catalog No. CAP-14-JT, Extra Cap for tubing with Ferrule and Gripper,



FEP GAS SAMPLING BAGS WITH

STAINLESS STEEL SWAGELOK® TYPE FITTING FOR 1/4" OD TUBING



CATALOG NO.	SIZE INCHES	CAPACITY LITERS	BAGS/ PACK	PRICE/ BAG
GSFS000-0606	6 X 6	0.6	10	
GSFS000-0707	7 X 7	1.0	10	
GSFS000-0610	6 X 10	1.2	10	
GSFS000-0612	6 X 12	1.5	10	
GSFS000-0909	9 X 9	2.0	10	
GSFS000-1010	10 X 10	3.0	10	
GSFS000-1212	12 X 12	5.0	10	
GSFS000-1218	12 X 18	9.5	5	
GSFS000-1219	12 X 19	10.0	5	
GSFS000-1818	18 X 18	16.0	3	
GSFS000-1824	18 X 24	25.0	1	
GSFS000-2424	24 X 24	40.0	1	
GSFS000-2430	24 X 30	56.0	1	
GSFS000-2436	24 X 36	73.0	1	
GSFS000-3030	30 X 30	80.0	1	

Custom sizes, Stainless Steel Valves, Swagelok® type, Polypropylene Combo Valves, TCLP, Barbed and other fittings available

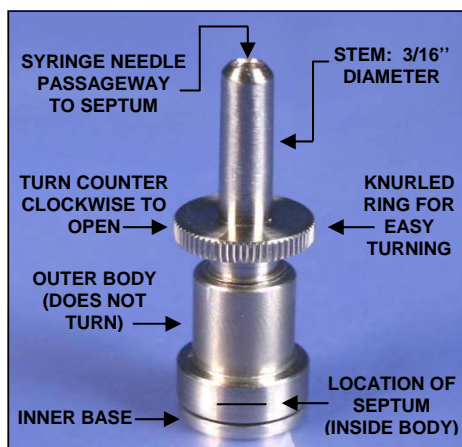
Tubing available, call for pricing

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FEP GAS SAMPLING BAGS

WITH

STAINLESS STEEL COMBO ON/OFF VALVE WITH REPLACEABLE SEPTUM



A single fitting combines flushing, filling and sealing the bag, and a replaceable septum with syringe port for withdrawing samples for analysis.

CATALOG NO.	SIZE INCHES	CAPACITY LITERS	BAGS/ PACK	PRICE/ BAG
GSFSSVS-0606	6 X 6	0.6	10	
GSFSSVS-0707	7 X 7	1.0	10	
GSFSSVS-0610	6 X 10	1.2	10	
GSFSSVS-0612	6 X 12	1.5	10	
GSFSSVS-0909	9 X 9	2.0	10	
GSFSSVS-1010	10 X 10	3.0	10	
GSFSSVS-1212	12 X 12	5.0	10	
GSFSSVS-1218	12 X 18	9.5	5	
GSFSSVS-1219	12 X 19	10.0	5	
GSFSSVS-1818	18 X 18	16.0	3	
GSFSSVS-1824	18 X 24	25.0	1	
GSFSSVS-2424	24 X 24	40.0	1	
GSFSSVS-2430	24 X 30	56.0	1	
GSFSSVS-2436	24 X 36	73.0	1	
GSFSSVS-3030	30 X 30	80.0	1	

Custom sizes, Stainless Steel Valves, Swagelok® type, Polypropylene Combo Valves, TCLP, Barbed and other fittings available

Tubing available, call for pricing

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Valve is oil-free, 316 Stainless Steel
Valve Stem is 3/16" diameter

Catalog No. SEP5007-SSVS-10, Replacement Septa, pk/10



**FEP GAS SAMPLING BAGS
WITH**

PFA FITTING FOR 1/4" OD TUBING



CATALOG NO.	SIZE INCHES	CAPACITY LITERS	BAGS/ PACK	PRICE/ BAG
GSFT14T-0606	6 X 6	0.6	10	
GSFT14T-0707	7 X 7	1.0	10	
GSFT14T-0610	6 X 10	1.2	10	
GSFT14T-0612	6 X 12	1.5	10	
GSFT14T-0909	9 X 9	2.0	10	
GSFT14T-1010	10 X 10	3.0	10	
GSFT14T-1212	12 X 12	5.0	10	
GSFT14T-1218	12 X 18	9.5	5	
GSFT14T-1219	12 X 19	10.0	5	
GSFT14T-1818	18 X 18	16.0	3	
GSFT14T-1824	18 X 24	25.0	1	
GSFT14T-2424	24 X 24	40.0	1	
GSFT14T-2430	24 X 30	56.0	1	
GSFT14T-2436	24 X 36	73.0	1	
GSFT14T-3030	30 X 30	80.0	1	

Custom sizes, Stainless Steel Valves, Swagelok® type, Polypropylene Combo Valves, TCLP, Barbed and other fittings available

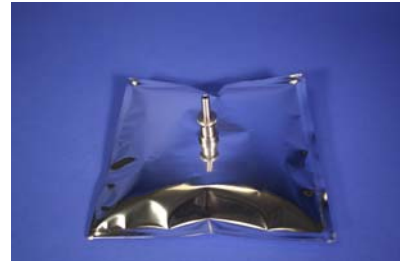
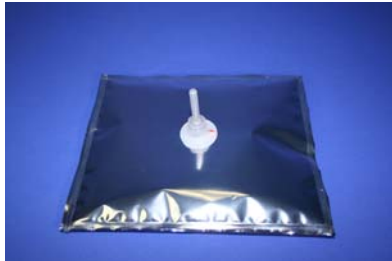
Tubing available, call for pricing

Catalog No. CAP-14-PS, Extra Cap with septum,

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MULTI-LAYER FOIL BAGS



Multi-Layer Foil bags provide light and moisture protection for low molecular weight compounds such as hydrogen that are unstable when collected into standard Tedlar[®] bags. Use a low flow air sample pump with exhaust port.

- For Methane, CO, CO₂, and other gases.
- The only gas bag material that can sample and store hydrogen sulfide.
- Collect low molecular weight compounds and inert gases not stable for Tedlar[®].
- Water and vapor-proof.
- Sample stability up to 5 days.
- Available with Polypropylene Locking Combo Valve with Septum, Polypropylene Screw Cap Combo Valve with Replaceable Septum, and Stainless Steel Combo Valve with Replaceable Septum.
- Custom bags available.
- Minimal adsorption.
- Samples protected from light by opaque material.
- Protect light-sensitive compounds without the use of an outer container.
- The inside surface is inert, minimizing absorption and adsorption of compounds.
- Multi-Layer Foil bags have strong, even seals, making them ideal for mailing or shipping to a laboratory for analysis. The multi-layer material is tough, flexible, and water/vapor-proof.

Applications

- Biogas and landfill gas (LFG) sampling
 - Sewage treatment plants and landfills
 - Emission control
 - Fruit warehouses
 - Fermentation cellars
- Site sampling
- Mobile surveys
- Transfer of calibration gases to instrument from lab
- Assessing exposure from leaks and spills
- Indoor air studies
- Testing of workplace air quality
 - OSHA ID-172 (Carbon Dioxide)
 - OSHA ID-210 (Carbon Monoxide)

Note: Multi-Layer Foil Bags are not suitable for collecting low ppm to high ppb VOC's due to the composition of the bag material.



MULTI-LAYER FOIL GAS BAG SPECIFICATIONS

Provides an excellent flexible moisture vapor barrier for many applications. The silver outer surface makes an attractive package plain or printed.

PHYSICAL PROPERTIES

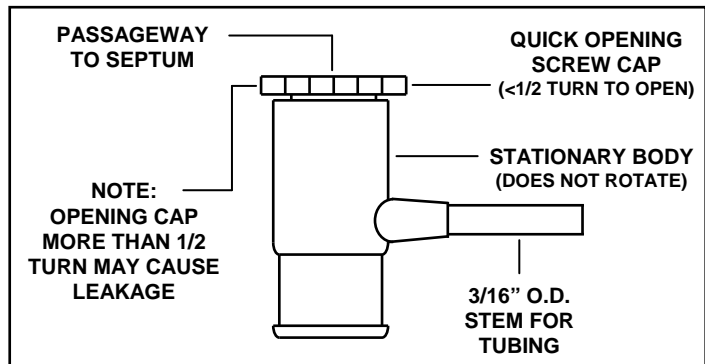
Thickness	4.6 mils nominal	ASTM-D-374
Tensile (MD)	23 Lbs. / In.	ASTM-D-882
Tensile (CD)	24 Lbs. / In.	ASTM-D-882
MVTR	0.0006 g / 100 in. ² / 24 hrs. @ 90% RH 100° F	ASTM F 1249
Oxygen Transmission	0.0006 cc / M ² / 24 hrs. @ dry, 73° F	ASTM D 3985
CO ₂ Transmission Rate	0.0005 cc / 100 in ² / 24 hrs. @ 0% RH, 73° F	
Specific Gravity	1.09 gm / cc	
Elmendorf Tear (MD)	116 grams	TAPPI T414
Elmendorf Tear (CD)	147 grams	TAPPI T414
Maximum Operating Temp.	190° F	

The values shown above were developed from random samples taken from production material. We believe them to be typical for this particular product. Because of normal lot to lot variations, actual values may vary somewhat from those depicted here. Velocity Scientific Solutions makes no warranty, express or implied, as to the suitability of those materials for any specific use. Customers should determine product suitability through their own internal criteria.



MULTI-LAYER FOIL BAGS WITH

SCREW CAP COMBO VALVE WITH SEPTUM



CATALOG NO.	SIZE INCHES	CAPACITY LITERS	BAGS/ PACK	PRICE/ BAG
GSAP001-0707S	7 X 7	1.0	10	
GSAP002-0909S	9 X 9	2.0	10	
GSAP003-1010S	10 X 10	3.0	10	
GSAP005-1212S	12 X 12	5.0	10	
GSAP010-1219S	12 X 19	10.0	5	
GSAP012-1221S	12 X 21	12.0	3	
GSAP025-1824S	18 X 24	25.0	1	
GSAP040-2424S	24 X 24	40.0	1	

Custom sizes, Stainless Steel Valves, Swagelok® type, Polypropylene Combo Valves, TCLP, Barbed and other fittings available

Valve is inert, industry standard polypropylene
Valve Stem is 3/16" diameter

Tubing available, call for pricing

© SWAGELOK: reg. trademark of Swagelok Inc.

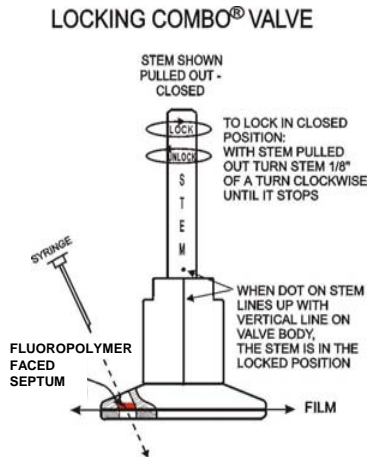
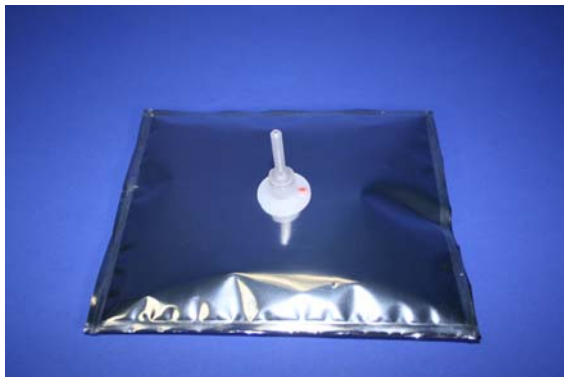


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MULTI-LAYER FOIL BAGS WITH

LOCKING COMBO VALVE[®] WITH SEPTUM



CATALOG NO.	SIZE INCHES	CAPACITY LITERS	BAGS/ PACK	PRICE/ BAG
GSAP001-0707	7 X 7	1.0	10	
GSAP002-0909	9 X 9	2.0	10	
GSAP003-1010	10 X 10	3.0	10	
GSAP005-1212	12 X 12	5.0	10	
GSAP010-1219	12 X 19	10.0	5	
GSAP012-1221	12 X 21	12.0	3	
GSAP025-1824	18 X 24	25.0	1	
GSAP040-2424	24 X 24	40.0	1	

Custom sizes, Stainless Steel Valves, Swagelok[®] type, Polypropylene Combo Valves, TCLP, Barbed and other fittings available

Valve is inert, industry standard polypropylene Valve Stem is 3/16" diameter

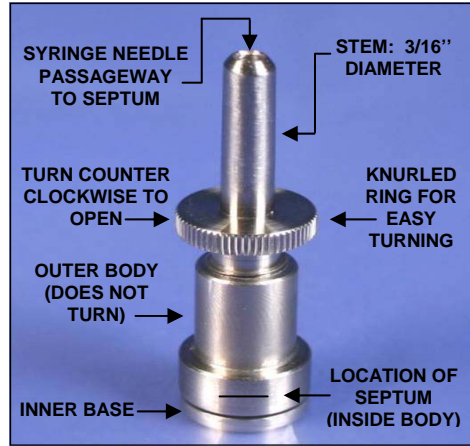
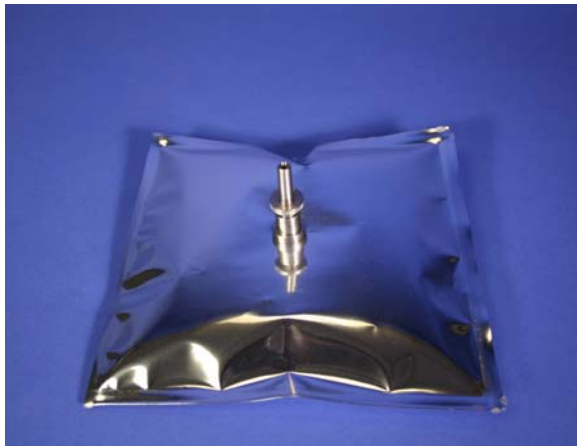
Tubing available, call for pricing

© LOCKING COMBO[®] reg. trademark of Jensen Inert Products Inc.
© SWAGELOK: reg. trademark of Swagelok Inc.



**MULTI-LAYER FOIL BAGS
WITH**

**STAINLESS STEEL COMBO ON/OFF VALVE
WITH REPLACEABLE SEPTUM**



A single fitting combines flushing, filling and sealing the bag, and a replaceable septum with syringe port for withdrawing samples for analysis.

CATALOG NO.	SIZE INCHES	CAPACITY LITERS	BAGS/ PACK	PRICE/ BAG
GSASSVS-0707	7 X 7	1.0	10	
GSASSVS-0909	9 X 9	2.0	10	
GSASSVS-1010	10 X 10	3.0	10	
GSASSVS-1212	12 X 12	5.0	10	
GSASSVS-1219	12 X 19	10.0	5	
GSASSVS-1221	12 X 21	12.0	3	
GSASSVS-1824	18 X 24	25.0	1	
GSASSVS-2424	24 X 24	40.0	1	

Custom sizes, Stainless Steel Valves, Swagelok® type, Polypropylene Combo Valves, TCLP, Barbed and other fittings available

Valve is oil-free, 316 Stainless Steel
Valve Stem is 3/16" diameter

Tubing available, call for pricing

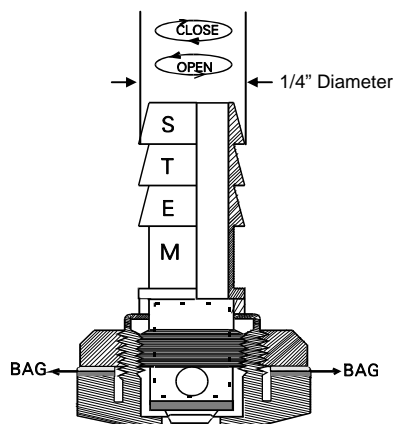
Catalog No. SEP5007-SSVS-10, Replacement Septa, pk/10

® SWAGELOK: reg. trademark of Swagelok Inc.



MULTI-LAYER FOIL BAGS WITH

**ON/OFF VALVE, NICKEL PLATED HR[®],
WITH 1/4" DIAMETER BARBED STEM**



CATALOG NO.	SIZE INCHES	CAPACITY LITERS	BAGS/ PACK	PRICE/ BAG
GSA1000-0707	7 X 7	1.0	10	
GSA1000-0909	9 X 9	2.0	10	
GSA1000-1010	10 X 10	3.0	10	
GSA1000-1212	12 X 12	5.0	10	
GSA1000-1219	12 X 19	10.0	5	
GSA1000-1221	12 X 21	12.0	3	
GSA1000-1824	18 X 24	25.0	1	
GSA1000-2424	24 X 24	40.0	1	

Custom sizes, Stainless Steel Valves, Swagelok[®] type, Polypropylene Combo Valves, TCLP, Barbed and other fittings available

Barbed Stem is 1/4" diameter
Use 3/16" ID tubing on barbed stem

Tubing available, call for pricing

© HR: reg. trademark of Halkey Roberts Inc.
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ALTEF Gas Sampling Bags



ALTEF is a proprietary fluoropolymer film developed specially for the air sampling market. ALTEF meets or exceeds many of the desired characteristics of Tedlar® at a significantly lower cost.

- Low VOC and sulfur background levels.
- Similar stability properties as Tedlar® for a wide variety of compounds, including most VOCs.
- Developed as an alternative to Tedlar® film for most gas sampling applications.
- Key Features:
 - Suitable for sampling and analysis of most VOCs within 2 days, and many sulfur compounds for up to 24 hours.
 - Abrasion Resistant.
 - Chemically Inert to most acids, aliphatic and aromatic organic compounds, chlorinated solvents, and alcohols.
- Contains no additives, fillers or pigments.
- Choice of nine fitting options.
- Minimal adsorption.
- Superior storage for organics.
- Inherently pure.
- Benefits of ALTEF as compared to Tedlar®:
 - Readily available, in stock.
 - Significantly less expensive than Tedlar®.
 - Lower VOC background than Tedlar®.
 - Longer storage times for many compounds versus Tedlar® bags.
 - Unlike Tedlar®, ALTEF does not exhibit background levels of DMAC and phenol.

ALTEF is not recommended for ketones or esters in high concentrations (>30%)

ALTEF is not suitable for storing H₂S. Our Multi-Layer Foil bags are the best choice for collecting and storing H₂S.

Unique Properties of ALTEF compared to Tedlar®

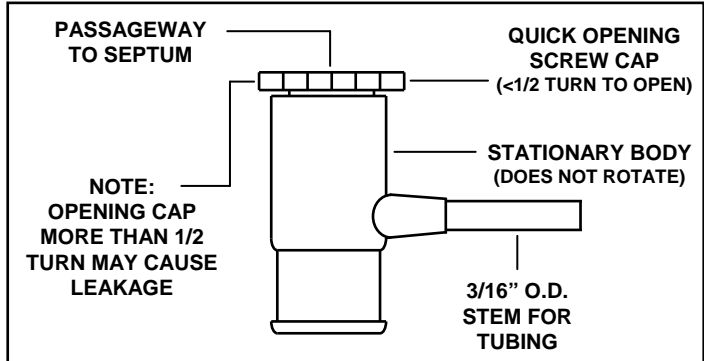
Film	Thickness	Tensile Strength	Max. Operating Temp.	Specific Gravity	Oxygen Permeability	Water Vapor Permeability	Carbon Dioxide Permeability
ALTEF	.003"	6100 psi	150°C (302°F)	1.78	58 cc/m ² x d	12-15 g/m ² x d	172 cc/m ² x d
Tedlar®	.002"	8000 psi	204°C (400°F)	1.70	50 cc/m ² x d	9-57 g/m ² x d	172 cc/m ² x d

Tedlar® is a registered trademark of E.I DuPont



ALTEF GAS SAMPLING BAGS WITH

SCREW CAP COMBO VALVE WITH SEPTUM



CATALOG NO.	SIZE INCHES	CAPACITY LITERS	BAGS/ PACK	PRICE/ BAG
GSSP000-0606S	6 X 6	0.6	10	
GSSP001-0707S	7 X 7	1.0	10	
GSSP002-0909S	9 X 9	2.0	1	
GSSP003-1010S	10 X 10	3.0	10	
GSSP003-0912S	9 X 12	3.0	10	
GSSP005-1212S	12 X 12	5.0	10	
GSSP008-1217S	12 X 17	8.0	10	
GSSP009-1218S	12 X 18	9.5	5	
GSSP010-1219S	12 X 19	10.0	5	
GSSP012-1221S	12 X 21	12.0	3	
GSSP016-1818S	18 X 18	16.0	3	
GSSP025-1824S	18 X 24	25.0	1	
GSSP040-2424S	24 X 24	40.0	1	
GSSP056-2430S	24 X 30	56.0	1	
GSSP073-2436S	24 X 36	73.0	1	
GSSP080-3030S	30 X 30	80.0	1	
GSSP100-3036S	30 X 36	100.0	1	

Custom sizes, Stainless Steel Valves, Swagelok® type, Polypropylene Combo Valves, TCLP, Barbed and other fittings available

Tubing available, call for pricing

© SWAGELOK: reg. trademark of Swagelok Inc.

Valve is inert, industry standard polypropylene
Valve Stem is 3/16" diameter

Catalog No. SEP5007-SCV-10, Replacement Septa,
pk/10



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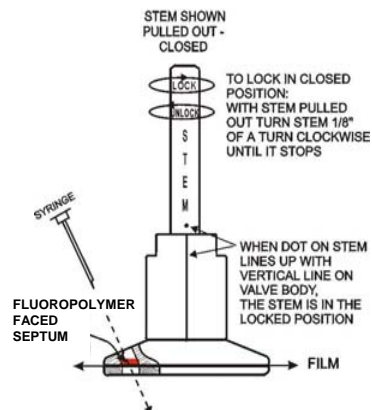


ALTEF GAS SAMPLING BAGS WITH

LOCKING COMBO VALVE[®] WITH SEPTUM



LOCKING COMBO[®] VALVE



CATALOG NO.	SIZE INCHES	CAPACITY LITERS	BAGS/ PACK	PRICE/ BAG
GSSP000-0606	6 X 6	0.6	10	
GSSP001-0707	7 X 7	1.0	10	
GSSP002-0909	9 X 9	2.0	10	
GSSP003-1010	10 X 10	3.0	10	
GSSP003-0912	9 X 12	3.0	10	
GSSP005-1212	12 X 12	5.0	10	
GSSP008-1217	12 X 17	8.0	10	
GSSP009-1218	12 X 18	9.5	5	
GSSP010-1219	12 X 19	10.0	5	
GSSP012-1221	12 X 21	12.0	3	
GSSP016-1818	18 X 18	16.0	3	
GSSP025-1824	18 X 24	25.0	1	
GSSP040-2424	24 X 24	40.0	1	
GSSP056-2430	24 X 30	56.0	1	
GSSP073-2436	24 X 36	73.0	1	
GSSP080-3030	30 X 30	80.0	1	
GSSP100-3036	30 X 36	100.0	1	

Custom sizes, Stainless Steel Valves, Swagelok[®] type, Polypropylene Combo Valves, TCLP, Barbed and other fittings available.

Valve is inert, industry standard polypropylene. Valve Stem is 3/16" diameter.

Tubing available, call for pricing.

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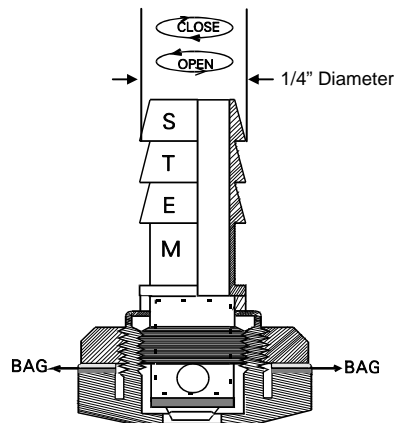


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ALTEF GAS SAMPLING BAGS WITH

**ON/OFF VALVE, NICKEL PLATED HR[®],
WITH 1/4" DIAMETER BARBED STEM**



CATALOG NO.	SIZE INCHES	CAPACITY LITERS	BAGS/ PACK	PRICE/ BAG
GSS1000-0606	6 X 6	0.6	10	
GSS1000-0707	7 X 7	1.0	10	
GSS1000-0909	9 X 9	2.0	10	
GSS1000-1010	10 X 10	3.0	10	
GSS1000-0912	9 X 12	3.0	10	
GSS1000-1212	12 X 12	5.0	10	
GSS1000-1217	12 X 17	8.0	10	
GSS1000-1218	12 X 18	9.5	5	
GSS1000-1219	12 X 19	10.0	5	
GSS1000-1221	12 X 21	12.0	3	
GSS1000-1818	18 X 18	16.0	3	
GSS1000-1824	18 X 24	25.0	1	
GSS1000-2424	24 X 24	40.0	1	
GSS1000-2430	24 X 30	56.0	1	
GSS1000-2436	24 X 36	73.0	1	
GSS1000-3030	30 X 30	80.0	1	
GSS1000-3036	30 X 36	100.0	1	

Custom sizes, Stainless Steel Valves, Swagelok[®] type, Polypropylene Combo Valves, TCLP, Barbed and other fittings available

Barbed Stem is 1/4" diameter
Use 3/16" ID tubing on barbed stem

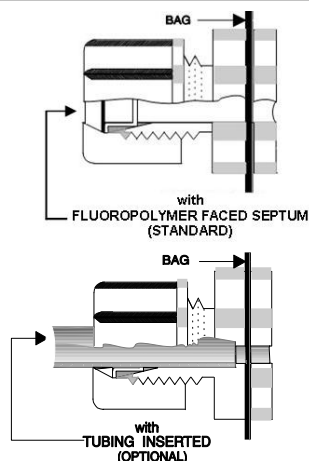
Tubing available, call for pricing

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© HR: reg. trademark of Halkey Roberts Inc.
© SWAGELOK: reg. trademark of Swagelok Inc.



ALTEF GAS SAMPLING BAGS WITH

PLASTIC JACO® FITTING WITH FLUOROPOLYMER FACED SEPTUM



CATALOG NO.	SIZE INCHES	CAPACITY LITERS	BAGS/ PACK	PRICE/ BAG
GSS001S-0606	6 X 6	0.6	10	
GSS001S-0707	7 X 7	1.0	10	
GSS001S-0909	9 X 9	2.0	10	
GSS001S-1010	10 X 10	3.0	10	
GSS001S-0912	9 X 12	3.0	10	
GSS001S-1212	12 X 12	5.0	10	
GSS001S-1217	12 X 17	8.0	10	
GSS001S-1218	12 X 18	9.5	5	
GSS001S-1219	12 X 19	10.0	5	
GSS001S-1221	12 X 21	12.0	3	
GSS001S-1818	18 X 18	16.0	3	
GSS001S-1824	18 X 24	25.0	1	
GSS001S-2424	24 X 24	40.0	1	
GSS001S-2430	24 X 30	56.0	1	
GSS001S-2436	24 X 36	73.0	1	
GSS001S-3030	30 X 30	80.0	1	
GSS001S-3036	30 X 36	100.0	1	

Custom sizes, Stainless Steel Valves, Swagelok® type, Polypropylene Combo Valves, TCLP, Barbed and other fittings available

Tubing available, call for pricing

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Use 1/4" OD tubing

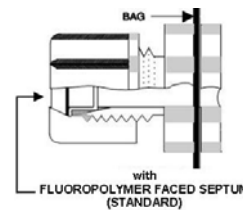
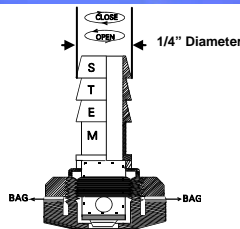
Catalog No. SEP5007-JSF-10, Replacement Septa, pk/10

Catalog No. CAP-14-JT, Extra Cap for tubing with Ferrule and Gripper



**ALTEF GAS SAMPLING BAGS
WITH**

ON/OFF VALVE, NICKEL PLATED HR[®], WITH 1/4" DIAMETER BARBED STEM & SEPARATE PLASTIC JACO[®] FITTING WITH FLUOROPOLYMER FACED SEPTUM



CATALOG NO.	SIZE INCHES	CAPACITY LITERS	BAGS/ PACK	PRICE/ BAG
GSS101S-0606	6 X 6	0.6	10	
GSS101S-0707	7 X 7	1.0	10	
GSS101S-0909	9 X 9	2.0	10	
GSS101S-1010	10 X 10	3.0	10	
GSS101S-0912	9 X 12	3.0	10	
GSS101S-1212	12 X 12	5.0	10	
GSS101S-1217	12 X 17	8.0	10	
GSS101S-1218	12 X 18	9.5	5	
GSS101S-1219	12 X 19	10.0	5	
GSS101S-1221	12 X 21	12.0	3	
GSS101S-1818	18 X 18	16.0	3	
GSS101S-1824	18 X 24	25.0	1	
GSS101S-2424	24 X 24	40.0	1	
GSS101S-2430	24 X 30	56.0	1	
GSS101S-2436	24 X 36	73.0	1	
GSS101S-3030	30 X 30	80.0	1	
GSS101S-3036	30 X 36	100.0	1	

Custom sizes, Stainless Steel Valves, Swagelok[®] type, Polypropylene Combo Valves, TCLP, Barbed and other fittings available

Tubing available, call for pricing

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Use 3/16" ID tubing on 1/4" diameter Barbed Stem
Use 1/4" OD tubing on JACO[®]

Catalog No. SEP5007-JSF-10, Replacement Septa, pk/10

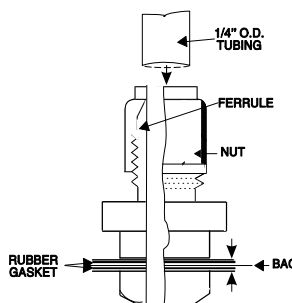
Catalog No. CAP-14-JT, Extra Cap for tubing with Ferrule and Gripper,





ALTEF GAS SAMPLING BAGS WITH

STAINLESS STEEL SWAGelok® TYPE FITTING FOR 1/4" OD TUBING



CATALOG NO.	SIZE INCHES	CAPACITY LITERS	BAGS/ PACK	PRICE/ BAG
GSSS000-0606	6 X 6	0.6	10	
GSSS000-0707	7 X 7	1.0	10	
GSSS000-0909	9 X 9	2.0	10	
GSSS000-1010	10 X 10	3.0	10	
GSSS000-0912	9 X 12	3.0	10	
GSSS000-1212	12 X 12	5.0	10	
GSSS000-1217	12 X 17	8.0	10	
GSSS000-1218	12 X 18	9.5	5	
GSSS000-1219	12 X 19	10.0	5	
GSSS000-1221	12 X 21	12.0	3	
GSSS000-1818	18 X 18	16.0	3	
GSSS000-1824	18 X 24	25.0	1	
GSSS000-2424	24 X 24	40.0	1	
GSSS000-2430	24 X 30	56.0	1	
GSSS000-2436	24 X 36	73.0	1	
GSSS000-3030	30 X 30	80.0	1	
GSSS000-3036	30 X 36	100.0	1	

Custom sizes, Stainless Steel Valves, Swagelok® type, Polypropylene Combo Valves, TCLP, Barbed and other fittings available

Tubing available, call for pricing

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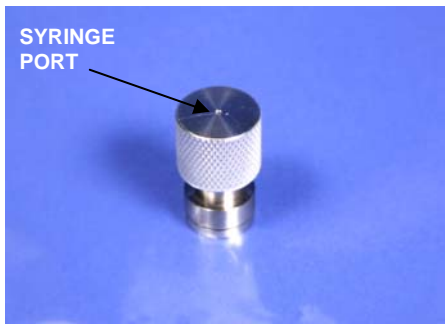


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ALTEF GAS SAMPLING BAGS
For EPA TCLP Method
WITH

SINGLE STAINLESS STEEL SEPTUM FITTING



CATALOG NO.	SIZE INCHES	CAPACITY LITERS	BAGS/ PACK	PRICE/ BAG
GSSTCLP-0606	6 X 6	0.6	10	
GSSTCLP-0707	7 X 7	1.0	10	
GSSTCLP-0909	9 X 9	2.0	10	
GSSTCLP-1010	10 X 10	3.0	10	
GSSTCLP-0912	9 X 12	3.0	10	
GSSTCLP-1212	12 X 12	5.0	10	
GSSTCLP-1217	12 X 17	8.0	10	
GSSTCLP-1218	12 X 18	9.5	5	
GSSTCLP-1219	12 X 19	10.0	5	
GSSTCLP-1221	12 X 21	12.0	3	
GSSTCLP-1818	18 X 18	16.0	3	
GSSTCLP-1824	18 X 24	25.0	1	
GSSTCLP-2424	24 X 24	40.0	1	
GSSTCLP-2430	24 X 30	56.0	1	
GSSTCLP-2436	24 X 36	73.0	1	
GSSTCLP-3030	30 X 30	80.0	1	
GSSTCLP-3036	30 X 36	100.0	1	

Custom sizes, Stainless Steel Valves, Swagelok® type, Polypropylene Combo Valves, TCLP, Barbed and other fittings available

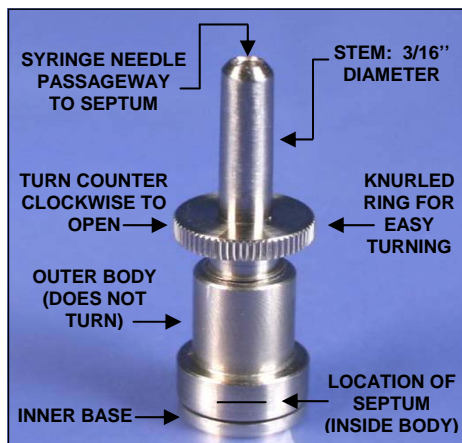
Tubing available, call for pricing

Catalog No. SEP-9010-TCLP-10, Replacement Septa, pk/10

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ALTEF GAS SAMPLING BAGS WITH

STAINLESS STEEL COMBO ON/OFF VALVE WITH REPLACEABLE SEPTUM



A single fitting combines flushing, filling and sealing the bag, and a replaceable septum with syringe port for withdrawing samples for analysis.

CATALOG NO.	SIZE INCHES	CAPACITY LITERS	BAGS/PACK	PRICE/BAG
GSSSSVS-0606	6 X 6	0.6	10	
GSSSSVS-0707	7 X 7	1.0	10	
GSSSSVS-0909	9 X 9	2.0	10	
GSSSSVS-1010	10 X 10	3.0	10	
GSSSSVS-0912	9 X 12	3.0	10	
GSSSSVS-1212	12 X 12	5.0	10	
GSSSSVS-1217	12 X 17	8.0	10	
GSSSSVS-1218	12 X 18	9.5	5	
GSSSSVS-1219	12 X 19	10.0	5	
GSSSSVS-1221	12 X 21	12.0	3	
GSSSSVS-1818	18 X 18	16.0	3	
GSSSSVS-1824	18 X 24	25.0	1	
GSSSSVS-2424	24 X 24	40.0	1	
GSSSSVS-2430	24 X 30	56.0	1	
GSSSSVS-2436	24 X 36	73.0	1	
GSSSSVS-3030	30 X 30	80.0	1	
GSSSSVS-3036	30 X 36	100.0	1	

Custom sizes, Stainless Steel Valves, Swagelok® type, Polypropylene Combo Valves, TCLP, Barbed and other fittings available

Tubing available, call for pricing

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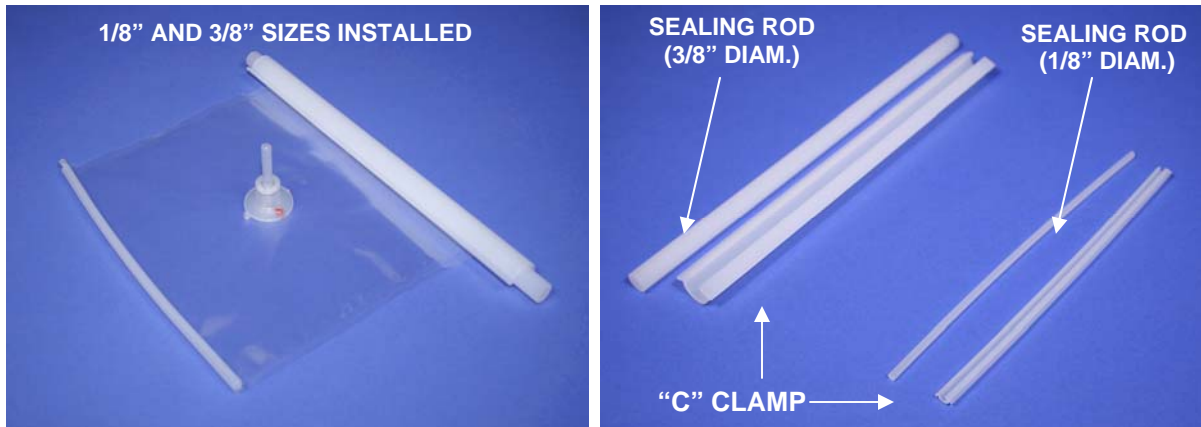
Valve is oil-free, 316 Stainless Steel
Valve Stem is 3/16" diameter

Catalog No. SEP5007-SSVS-10, Replacement Septa, pk/10



“C” CLAMP SEALING KITS for Liquid and Gas Sampling Bags

Available in 2 sizes



Polyethylene “C” Clamps and Sealing Rods can be cut to any length. To make an airtight, leakproof seal, place the “C” Clamp, open side up, on a clean, hard surface. Wrap the open bag end once over the round plastic sealing rod and push the rod down into the “C” shaped opening of the “C” Clamp, inserting the middle of the rod first, then moving outward toward each end. We recommend ordering “C” Clamp Sealing Kits at least 1” longer than the length of the bag end to be sealed. The Rod in each unit (kit) is longer than the “C” Clamp, for easy removal.

Catalog No.	Rod Diameter (Nominal)	Length	Price
CPSBAGS-4438	3/8”	44”	
CPSBAGS-4818	1/8”	48”	
CPSBAGS-138 ¹	3/8”	1” to 44”	
CPSBAGS-118 ¹	1/8”	1” to 48”	

¹ To order “C” Clamp sealing kits in multiples of 1”, add “X” and the number of inches to the end of the Catalog No.

example: 27” long “C” Clamp, 3/8” rod diameter = Catalog No. CPSBAGS-138X27.