Cali 5 Bond

Air & Gas Sampling Bags

Gas Sampling Bags shown in pillow (left) or snout shape (right). Pulse Pump III™ & Accessories

AIR & GAS SAMPLING BAGS **CALI-5-BOND**

User Benefits

- **Totally Non-Permeable**
- **Chemically Inert**
- **5-Layer Material**
- **Totally Opaque** - provides protection against UV light
- **Extra Strength** (5 mil thick)
- **Extremely Rugged & Portable**
- **Indefinite Shelf-Life**

The construction and materials of Cali-5-Bond™ gas sampling bags ensure the physical integrity of any sample taken, it remains truly representative of its collection environment or medium conditions. Cali-5-Bond™ bags allows all samples to be stored without change over time.

In contrast to other single or multi-layer plastic materials currently in use, polymer Cali-5-Bond™ sampling bags are made by a patented production process bonding five different layers of material together into a single flexible sheet 5 mil (0.14 mm) thick. The absolute barrier to air, gas or liquid permeation is a layer of aluminum foil, a proprietary formulation of HDPE forms the totally inert and non-reactive inner-liner (wetted surface).

Cali-5-Bond™ air and gas sampling bags provide a simple, reliable and economic method of collecting air, gas and liquid samples from any collection point and transporting them to a centrally located test instrument or remote laboratory for final analysis.

APPLICATION

Industrial process and fundamental research applications are as numerous as the human imagination can be creative. New uses are literally discovered every day; and join applications as diverse as collecting vapors; liquids; and even odors for panel testing.

- **Hard-to-Reach Locations** - Ideal for use, bags are an essential supply item when stack testing CEMS or conducting FCC tests at petroleum refineries.
- **Real-Time Gas Analysis Techniques** - Often times restrict gas monitoring activity to a single fixed point. In contrast, totally portable gas sampling bags permit absolute freedom of movement and permit economic simultaneous sampling over a wide area.
- **Oil & Gas Field Exploration** - Used extensively in oil and gas field exploration as wells are sunk and monitored. Ideal for collecting natural gas samples for isotopic analysis and source characterization.
- **Biotechnology & Life Science** Cali-5-Bond™ sample bags fly in NASA's Space Program and are also found in the deepest mines; both instances where monitoring air quality is a "life and death" matter.
- **EPA Environmental or IH/OSHA Collection** - Gas sampling bags may be used to collect "grab" or "time weighted" samples for ambient air and workplace compliance applications and audits.

Standard & Custom Sizes & Shapes Are Available To Meet Individual User Specifications

PRESSURE & TEMPERATURE

Gas sampling bag inflation pressures need not exceed 7.0" WG (17.4 mbar, 0.25 psi).

- **Bags Should Not Be Over Inflated** - When filled, they should not appear "tight". Over-inflation may lead to premature bag failure. When bag samples are air transported, ample provision should be made for gas expansion at higher flight altitudes. Users should consult US Department of Transportation (DOT) Code of Federal Regulations (CFR 49) and the International Air Transport Association (IATA) regulations which must be followed for the shipment of flammable and toxic gas(es) in gas sampling bags.
- **Bags should not be used at temperatures higher than 125°-130°F (50°-55°C)** - All polymer based gas sampling bags should be handled with extra care when used at constant gas volume temperatures above ambient, particularly above 110°-115°F (40°-45°C).

  Consult our Technical Service Department before undertaking any "bake-out" preparation of the bags as part of an established sampling protocol.

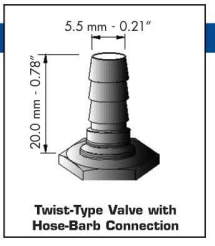
If high temperature stack gases are to be collected, sample line tubing should be long enough to allow the sampled gas stream to cool before entering the bag. Depending upon final sample analysis requirements, it may be necessary to collect any condensed vapor in the sampling line; or to "dry out" the wet sample gas flow into the bag.

CONNECTION CHOICES

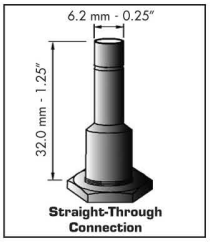
The choice of a single standard sample line connection is included in the quoted price of any bag:

- **Twist-Type Valve with Hose-Barb Connection** - (V-NPB-1-TT) This connection will allow the user to control the gas flow into or out of the bag by turning the stem open or closed. A jagged barb firmly secures 3/16" ID sample tubing to the stem of the valve.
- **Straight-Through Connection** - (STC-NPB-F-SR) This is an unobstructed gas channel connection and *will not* allow the user to control the flow of gas into or out of the bag. Two types of standard STC's are available: smooth shaft with "swage-ring" (facilitates the use of "quick disconnect" sample line adapters); or as a tire valve and threaded cap with its spring-loaded closing stem removed. Both are available in nickel plated brass (NPB).

See reverse for optional connections available.



Twist-Type Valve with Hose-Barb Connection



Straight-Through Connection

Calibrated Instruments, Inc.

Teknolab as

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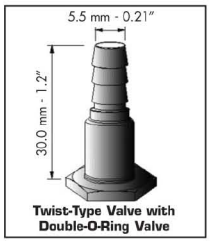
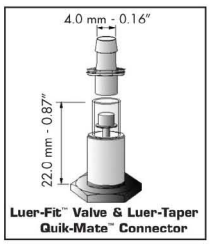
Cali-5-Bond Air & Gas Sampling Bags

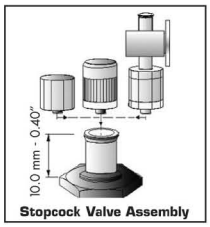
OPTIONAL CONNECTIONS



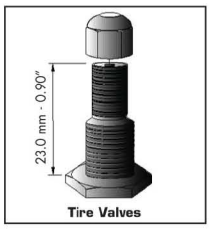
Twist-Type Valve with Double-O-Ring Valve



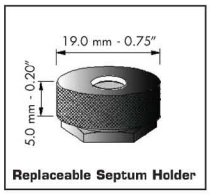
Luer-Fit™ Valve & Luer-Taper Quik-Mate™ Connector



Stopcock Valve Assembly



Tire Valves



Replaceable Septum Holder

- **Twist-Type Double-O-Ring Valve** - (V-NPB-2/OO) Operates in the same way as the Twist-Type Valve, however this valve has a secondary O-ring installed on the valve stem to eliminatgas loss at recommended inflation pressures.

- **The Luer-Fit Valve™ & Luer-Taper Quik-Mate™ Connector** - (V-L/F-1) A secure, self-closing valve which cannot be opened or left open accidentally, preventing any loss of gas or liquid sample. It is easy to use and requires no turning or twisting of a valve stem. The Luer-Taper Quik-Mate™ is a flow-through adapter for instant (push-pull) connection. The tapered fit between the ID of the valve stem housing and the OD of the Quik-Mate™ Connector becomes increasingly tighter as pressure is exerted. This ensures a gas-tight fit between the sample line tubing and the Luer-Fit Valve™.

- **Stopcock Valve™ Assembly** (Compatible with Luer-Taper Accessories) One of our most popular valves because of its great flexibility in different sampling applications. This valve allows the user to easily adjust the flow of gas with a greater degree of control. It consists of two components: a stopcock-base and a stopcock valve assembly which connects independently to the base by means of a rotating locking nut.

- **Tire Valves** - (V-CHR-S-1.12) Used in the same manner as when installed on an automobile tire. The optional Chrome valve is shown. It is also available in a Nickel Plated Brass version (length: 1.14 in / 29 mm) as a standard sampling bag fixture. An optional PVC intermediate sample line connection (SLC-PVC/6) with a threaded-twist connector is also available for use with the tire valve stem in order to fill and evacuate the gas sampling bag.

- **Replaceable Septum Holder** - (A-SEPHLD/DEL) - When a septum is affixed (glued) to a gas sampling bag with an adhesive, every penetration of the septum by a syringe needle makes another hole in the underlying bag material. This leads to continued bag deterioration and reduces its useful life. An optional Replaceable Septum Holder allows the user to change the septum as often as required. Replaceable septum holders are available in: Delrin, Nickel plated brass and Polysulfone. Stainless steel is available on special order.

- **Straight-Through Connection** - (STC-PP/.75ID) - Not Shown - This polypropylene STC has an inside diameter of 0.75 in (19 mm). This connection can be used when it is necessary to collect unobstructed, extremely low pressure air or gas flow. Examples: expired breathing air; closed chamber CO^2 gas exchange; low flow bio-gas samples.

- **Mini-Tube Extension™** - (STC-NPB-1/8"OD) - Not Shown - This STC has an outside diameter of 1/8" (3.2 mm) and can be used to connect smallest flexible tubing to the gas sampling bag. Its ID dimensions approximate those of gas lines typically found in high level GC analytical instrumentation. This STC can be used with the very smallest Swagelok™ double-ended "Quick Disconnect" fittings.

Standard Sizes Available - Pillows up to 200 liters and snouts to 44 liters. Custom sizes and shapes are available to meet individual user specifications.

Item Number	Standard Shape	Volume Liters*	Size (Approx) mm	Teknolab's varenummer
GSB-P/0.10	Pillow	0.1	76 x 127	**Ta kontakt**
GSB-P/0.25	Pillow	0.25	102 x 177	**Ta kontakt**
GSB-P/0.50	Pillow	0.5	152 x 203	**Ta kontakt**
GSB-P/1	Pillow	1.0	203 x 203**	**A4188**
GSB-P/2	Pillow	2.0	203 x 305	**A4190**
GSB-S/2	Snout	2.0	203 x 381	**A4150**
GSB-P/5	Pillow	5.0	203 x 584	**Ta kontakt**
GSB-S/5	Snout	5.0	203 x 686	**A4152**
GSB-P/10	Pillow	10	406 x 381	**Ta kontakt**
GSB-S/10	Snout	10	406 x 406	**A4186**
GSB-P/15	Pillow	15	400 x 482	**A4192**
GSB-P/22	Pillow	22	406 x 635	**Ta kontakt**
GSB-S/22	Snout	22	406 x 635	**A4154**
GSB-P/44	Pillow	44	609 x 635	**Ta kontakt**
GSB-S/44	Snout	44	610 x 610	**A4156**
GSB-P/60	Pillow	60	787 x 610	**A4194**
GSB-P/90	Pillow	90	787 x 787	**A4196**
GSB-P/100	Pillow	100	838 x 800	**Ta kontakt**
GSB-P/170	Pillow	170	787 x 1,245	**A4198**
GSB-P/200	Pillow	200	787 x 1,397	**Ta kontakt**

* Capacity equal to or greater than liter volume shown. Minimum volume shown measured @ 9.0" WG at (60°F/15°C) (22 mbar, 0.32 psi).

** 1-liter bags vary in shape. Shipped as available from stock.

TEKNOLAB INFORMERER:

Cali-5-Bond er våre mest populære gassprøvetakingsposer og er basert på en patentert produksjonsteknologi med klare fortrinn sammenlignet med "standard" poser basert en eller flere polymerlag. Den spesielle kombinasjonen av fem unike lag hvorav ett er aluminiumsfolie, gjør disse posene tilnærmet ikke-permeable og lystette, og dermed til førstevalget i applikasjoner hvor gassprøven må lagres over tid eller transporteres over lengre distanser. Cali-5-Bond har for eksempel etablert seg som en slags "standard" for gassprøvetaking offshore.

Bestselgere - puteformede 1L og 2L poser med stengenippel i rustfritt stål på ene siden og silikonseptum på motsatt side er to av våre desiderte bestselgere. Vi lagerfører til enhver tid begge disse to posene her på Kolbotn for å kunne tilby raskest mulig levering.

Spesialposer - Calibrated Instruments skreddersyr poser til ditt behov. Type ventil (se bilde), antall ventiler, samt utbyttbart septum, er noen av valgalternativene. For slike spesialposer bør du beregne min 4-6 ukers leveringstid.

Sampling - posene bør helst fylles gjennom ventilen og ikke gjennom septumet. Husk at posens evne til å holde på gassen, samt at dens levetid, reduseres for hver punktering av septumet. Standard stengenippel passer best til slanger med 3/16" ID. Posene fylles (og tømmes) enklest med en lavflowpumpe med inn- og utport, og vår egen Workhorse-pumpe fra SKC er et godt valg til dette formålet. Ta kontakt for nærmere informasjon.

Makstrykk - overtrykket i posene bør ikke overstige 17.4 mbar eller 0.25 psi. I praksis betyr dette at hvis posene ser ut som en "ballong", er trykket altfor høyt. Husk også å ta høyde for gassekspansjon hvis posene skal transporteres med fly eller helikopter.

Sprøyter - vanlige gasstette sprøyter med spiss nål og stengeventil kan brukes til å trekke ut eller tilsette et spesifikt volum med gass gjennom silikonseptumet som posen er utstyrt med. Vi fører slike sprøyter i de fleste volumer og fasonger. Ta kontakt for nærmere informasjon.

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