SENSOR SAMPLING SYSTEMS

FVBSS
FIXED VOLUME BOTTLE SAMPLING SYSTEM

The SENSOR Fixed Volume Bottle Sampling System (FVBSS) provides a repeatable fixed volume of sample during each sampling process without stopping flow of the process fast loop. As a safety precaution, it helps prevent overfilling of bottle. It utilizes the same sample valve as the Basic Bottle Sampling System (BBSS), with the addition of a needle valve to control the flow of the fixed volume into the sample bottle. No external tubing is required for the fixed volume chamber. The fixed volume chamber will be sized to meet the exact requirements of your sampling application. FVBSS is recommended when process pressure exceeds 150 psig or when a repeatable, defined volume of sample is desired. SENSOR Needle Purge (SNP) is included in the fixed volume design.

Features and Benefits

- Eliminate the possibility of overfilling a sample bottle
- Automatically purges process needle of any residual process thru SENSOR Needle Purge (SNP)
- Positive indication of free-flowing system; no plugged sample or vent needles
- Isolates sample bottle from process pressure
- 316L wetted parts standard
- Viton/Teflon seals standard
- Fixed volume sizes: 2oz. - 32oz. (60mL – 1000mL) other sizes available
- Operation & Installation Manual included

Materials of Construction

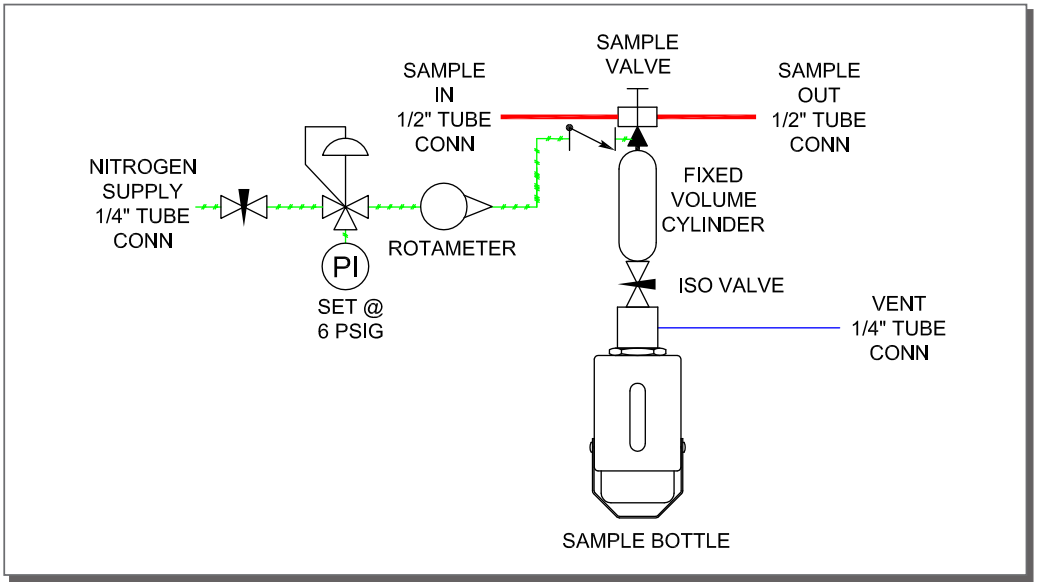
Sample Loop	316L Stainless Steel (SS)
Sample Valve	316L; 1/2" flow port
Process Needle	316SS; .083" - .148" OD
Vent Needle	316SS; .083" OD
O-Ring Material	Viton standard; optional Kalrez
Seal Material	Teflon
Bottle Shroud	PVC; 2 oz. - 32 oz.
Retaining Strap	Stainless Steel
Mounting Plate	Stainless Steel

Operating Pressure 2000 psig @ 70°F

Operating Temperature 135°F maximum without cooler; 800°F maximum with cooler and graphoil valve packing

Optional Equipment

Emissions Filter	Canister with activated carbon for use when no vent to flare is available; also available with indication crystals which change color to indicate saturated absorbent media
Isolation Valves	Isolation valves on sample inlet & outlet to allow for easy serviceability
Sample Coolers	For use when process temperature exceeds 135°F
Secondary Isolation Valve	Complies with double-block safety requirements
Enclosures	Enclosures, available insulated or uninsulated and with steam or electric heater elements
Mounting	2" X 60" pipe stand; galvanized



How to Order

Below is the quick select model number tree that provides you with all the options to configure and order a sampling system for your application.

- You must select a designator for each component
- You must supply a completed Application Data Sheet shown on pages 4 and 5

1 Model

Fixed Volume Bottle Sampling System with volume chamber	FVBSS

2 Needle Size

.083" Process/.083" Vent (standard)	A
.109" Process/.083" Vent	B
.148" Process/.083" Vent	C
.250" Sample Tube (stinger)	D

3 Fixed Volume Size

Fixed Volume Size (please specify) typically 75% of bottle size	XX

4 Shroud Size

2 oz.	02
4 oz.	04
8 oz.	08
16 oz.	16
32 oz.	32
None	NN
Special (please specify)	XX

5 Process Connection

05	1/2" Tubing (standard)
25	1/4" Tubing
37	3/8" Tubing
FF	Flanged (specify size and rating)

6 Optional Equipment

IB	Isolation Valves In/Out (Ball Valves)
CC	Emission Filter (Activated Carbon w/ Indication Crystals)
CF	Emission Filter (Activated Carbon)
DB	Double Block Valve
EB	Bottle Enclosure
EE	Enclosure w/ Electric Heater
EN	Enclosure (Non-Insulated)
ES	Enclosure w/ Steam Heater
KZ	Kalrez O-Rings
PC	Process Cooler
PS	2" Pipe Stand w/ Base
SL	Silconert Internal Coating
XX	Other Options (please specify)

FVBSS - B XX 04 25 KZ Example Model No.

Bottle System Application Data Sheet

Date	
Name	Phone
Company/Location	Email

PROCESS DATA

Media	Tag Numbers
*Pressure Inlet	Pressures over 150 PSI, Fixed Volume System is recommended
*Fast Loop Outlet Pressure	
*Vapor Pressure	Vapor Pressures > 19 psiA recommended sampled in Sample Cylinder
*Viscosity (CP) at Sampling Temperature	
*Temperature	Temperatures over 135 ° F, Process Cooling is recommended
Particles in Sample ❍ Yes ❍ No	Micron Size ____/____ (%) if >100 micron y-strainer recommended

MATERIALS OF CONSTRUCTION

*Wetted Parts	❍ 316SS (std.)	❍ Monel 400	❍ Hastelloy C276	❍ Other_____ *specify
*O-Ring Material (Elastomer)	❍ Viton (std.)	❍ Kalrez	❍ Other_____ *specify	
*Valve Packing Material	❍ Teflon (std.)	❍ Graphoil (Hi. Temp)		

CONNECTION AND MOUNTING

*Sample Inlet/Outlet Connection Size (1/4" Tube Standard)			
*Sample Inlet/Outlet Connection Type (specify tube, NPT, Flange)			
*Flare Vent Pressure_____	Vent to Flare_____	Vent to Carbon Absorber_____	Tell Tale Crystals_____

SAMPLE CONTAINER

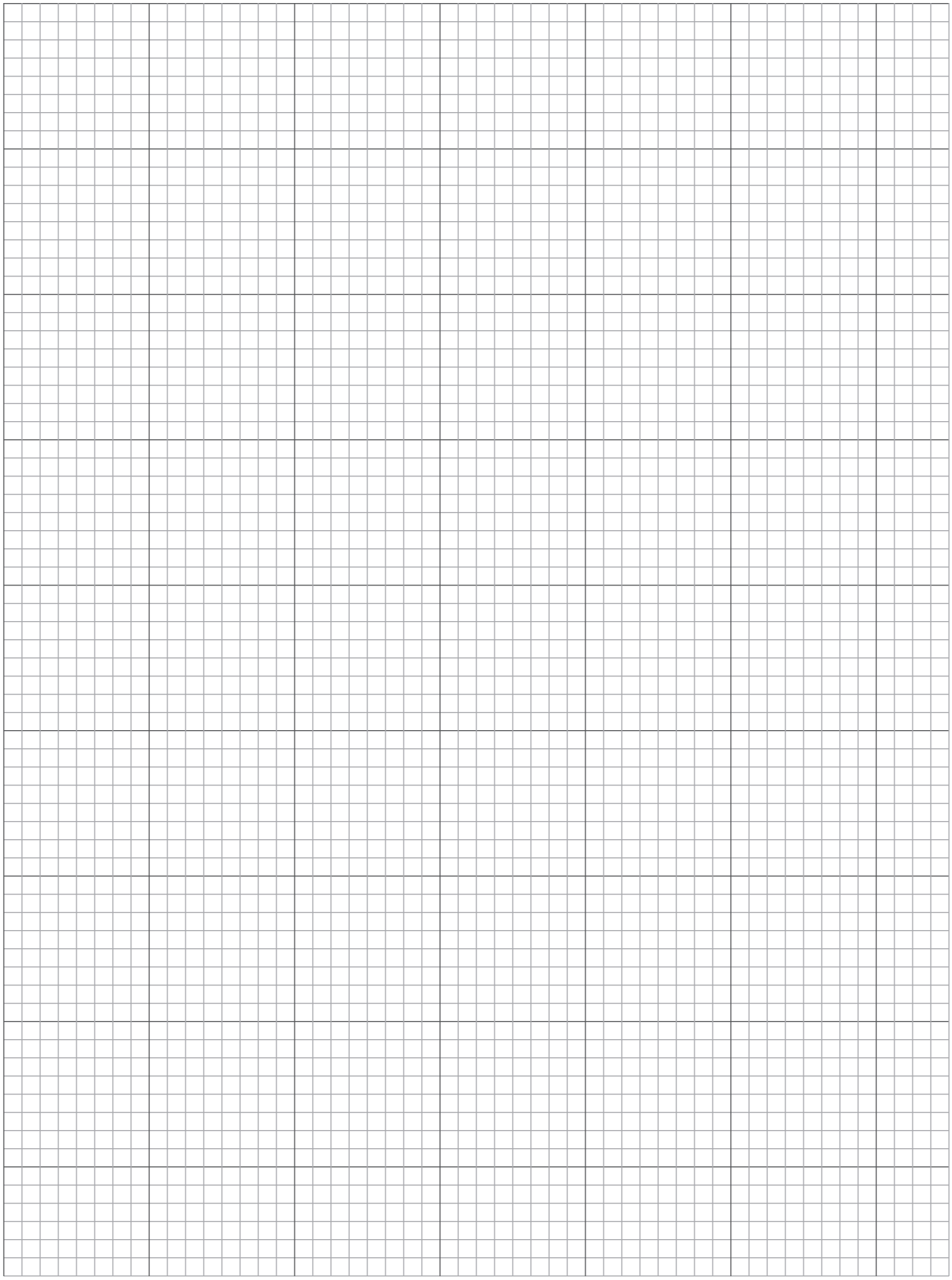
Size Container				
*Material of Container	❍ Glass	❍ Plastic	❍ Safety Coated Glass	❍ Other_____ *specify
*Method of Sampling	❍ Septum Bottle (closed loop, captured vent)	❍ Open Top Bottle		
*Type of Container	❍ Boston Round	❍ Customer (provide sample for manufacturing)		

OPTIONS (please check if needed)

❍ Sample Cooler	Additional Data Needed, Please complete heat transfer document			
❍ PipeStand for Mounting System				
❍ SENSOR Needle Purge				
❍ Secondary Sample Isolation Valve				
❍ Enclosure Type	Insulated ❍ Yes ❍ No			
	Heated ❍ Yes ❍ No	if yes, ❍ Steam or ❍ Electric	if electric, Volts _____	
❍ Process Block Valve	❍ Sample Inlet	❍ Sample Outlet	❍ Both	
❍ Check Valve on Vent				
❍ Non-standard Process Needle (.083std)	❍ .109	❍ .148	❍ 1/4" Stinger	
❍ Steam Stinger				
❍ Fixed Volume Size	❍ oz.	❍ mL	(if applicable)	

*Required information

SKETCH **VESSEL** or **APPLICATION** HERE



COMMENTS

See our full line of Sampling Systems at **SENSOReng.com**

SENSOR sampling systems provide a representative sample that is safe to both the operator and the environment. Our systems are designed to meet Leak Detection Repair (LDAR), Maximum Achievable Control Standards (MACT) and Volatile Organic Compounds (VOC) emission standards. Since no two sampling systems are exactly alike, each of our products is engineered to order.

Basic Bottle Sampling System

- Simple, flow-thru valve design
- Zero dead volume
- Replaceable process and vent needles
- Available with SENSOR Needle Purge

BBSS

ISS

Inline Sampling System

- Available in wide variety of piping materials and end connections
- Suitable for high temperature, high viscosity service
- Available with open tube “stinger” or process needle

Fixed Volume Bottle Sampling System

- Guarantees repeatable sample volume
- Zero dead volume
- Replaceable process and vent needles
- Suitable for high process pressures
- SENSOR needle purge standard

FVBSS

Liquefied & Vapor Gas Sampling Systems

- Safe, simple methodology for sampling high pressure liquefied gasses and process gasses
- Single handle operation
- Panel mounted pressure gauge
- Sight glass ensures safe cylinder outage on LGSS
- Ability to depressurize quick connects before removing cylinder

LGSS & VSS

SENSOReng.com

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