



The SENSOR Basic Bottle Sampling System (BBSS), is a closed loop liquid sampler that is ideal for processes with pressure less than 150 psig and process temperature less than 135°F. The sample is dispensed into the sample bottle by merely turning a valve. Process pressure forces the sample through the valve into the bottle and, with SENSOR Needle Purge (SNP), zero dead volume is ensured throughout the sample valve assembly.

## Features and Benefits

- Utilizes a unique needle valve design that virtually guarantees the stem will never seize due to process build up
- Utilizes a pencil point vent needle that assures the vent will not plug
- Covers a wide range of process pressures and temperatures where continuous “fast loop” flow is desired or viscous or freezing processes are encountered
- 316L metal seat with floating ceramic ball stem tip
- No dead volume when used in conjunction with needle purge
- Operation instructions and safety tags mounted on plate included as standard
- Sample valve stem threads are above the packing to eliminate fouling
- Shroud sizes from 2 oz. to 32 oz. Others available as an option
- 316L wetted parts standard
- Adjustable shroud with viewing slot protects operator in the event of a ruptured bottle
- Independently replaceable process needle and pencil point vent needle
- Replaceable/interchangeable needle adapter
- Ideal for all hazardous, low vapor pressure liquids
- Well suited for acids, caustics and chemicals where O<sub>2</sub> or H<sub>2</sub>O exposure may deteriorate the sample
- Operation & Installation Manual included



## Materials of Construction

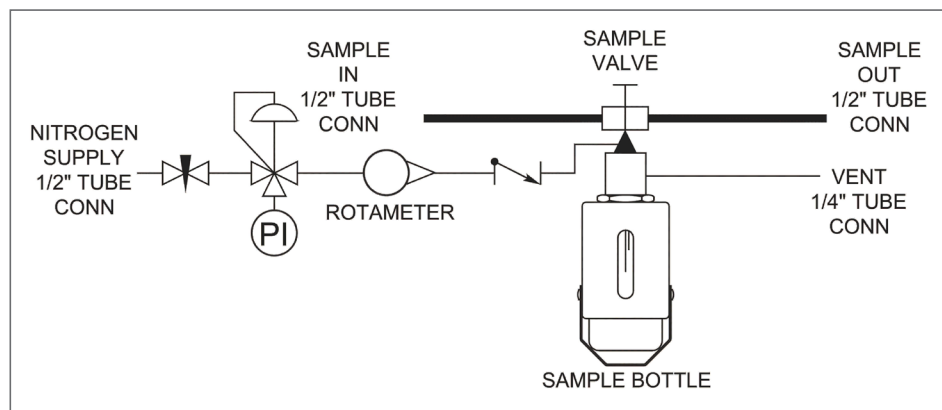
Sample Loop	316L Stainless Steel
Sample Valve	316L; 1/2" flow port
Process Needle	316SS; .083" - .148" OD
Vent Needle	316SS; .083" OD
O-Ring Material	Viton standard; optional Kalrez
Seal Material	Teflon
Bottle Shroud	PVC; 2 oz. - 32 oz.
Retaining Strap	Stainless Steel
Mounting Plate	Stainless Steel

**Operating Pressure** 150 psig maximum recommended pressure when sampling  
Sample valve and system rated to 2000 psig

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

## Optional Equipment

SENSOR Needle Purge	Includes check valve, regulator, rotameter, pressure gauge, and block valve
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 filter 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 Block Valve	Complies with double-block safety requirements
Enclosures	Stainless steel enclosures, available uninsulated or insulated and with steam or electric heater elements; other enclosure materials available
Mounting	2" X 60" pipe stand, galvanized



Shown with optional SENSOR Needle Purge (SNP).

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		2 Needle Size		3 Shroud Size		4 Process Connection		5 Optional Equipment	
Basic Bottling Sample System (1/2" Flow Thru)	BBSS	.083" Process/.083" Vent (standard)	A	2 oz.	02	05	1/2" Tubing (standard)	NP	SENSOR Needle Purge (SNP)
		.109" Process/.083" Vent	B	4 oz.	04	25	1/4" Tubing	CC	Emission Filter (Activated Carbon w/ Indication Crystals)
		.148" Process (TFE coated)/.083" Vent	C	8 oz.	08	37	3/8" Tubing	CF	Emission Filter (Activated Carbon)
		.250" Sample Tube (stinger)	D	16 oz.	16	FF	Flanged (specify size and rating)	DB	Double Block Valve
				32 oz.	32			EB	Bottle Enclosure
				None	NN			EE	Enclosure w/ Electric Heater
		Special (please specify)	XX					EI	Enclosure (Insulated)
								EN	Enclosure (Non-Insulated)
								ES	Enclosure w/ Steam Heater
								IB	Isolation Valves In/Out (Ball Valves)
								KZ	Kalrez O-Rings
								PC	Process Cooler
								PS	2" Pipe Stand w/ Base
								SL	Silconert Internal Coating
								XX	Other Options (please specify)

**BBSS - B 04 05 KZ**

Example Model No.

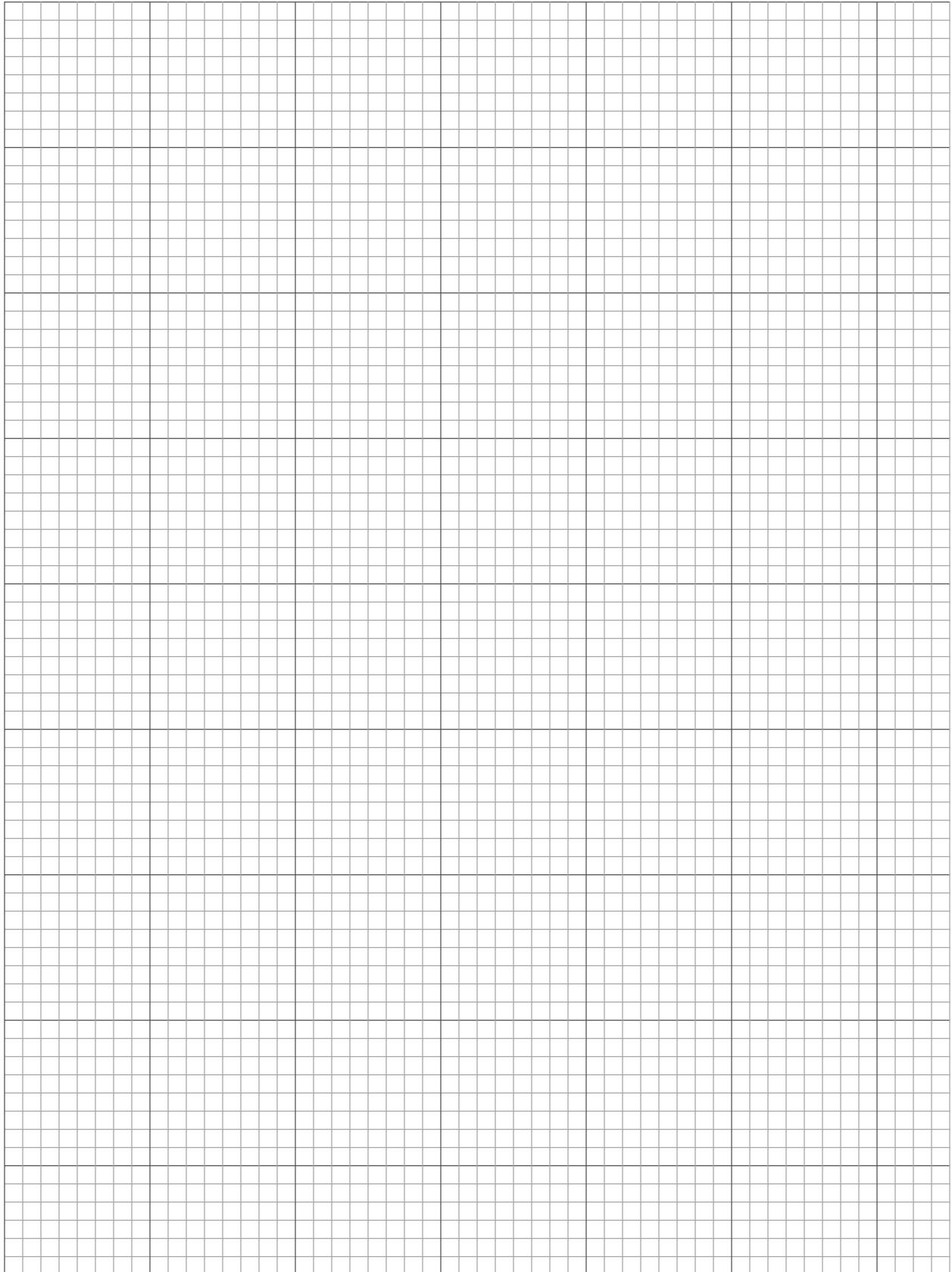
# Bottle System Application Data Sheet



Date		
Name		Phone
Company/Location		Email
<b>PROCESS DATA</b>		
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	<input type="radio"/> Yes <input type="radio"/> No	Micron Size ____ / ____ (%) if >100 micron y-strainer recommended
<b>MATERIALS OF CONSTRUCTION</b>		
*Wetted Parts	<input type="radio"/> 316SS (std.) <input type="radio"/> Monel 400 <input type="radio"/> Hastelloy C276 <input type="radio"/> Other _____	*specify
*O-Ring Material (Elastomer)	<input type="radio"/> Viton (std.) <input type="radio"/> Kalrez <input type="radio"/> Other _____	*specify
*Valve Packing Material	<input type="radio"/> Teflon (std.) <input type="radio"/> Graphoil (Hi. Temp)	
<b>CONNECTION AND MOUNTING</b>		
*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 _____		
<b>SAMPLE CONTAINER</b>		
Size Container		
*Material of Container	<input type="radio"/> Glass <input type="radio"/> Plastic <input type="radio"/> Safety Coated Glass <input type="radio"/> Other _____	*specify
*Method of Sampling	<input type="radio"/> Septum Bottle (closed loop, captured vent) <input type="radio"/> Open Top Bottle	
*Type of Container	<input type="radio"/> Boston Round <input type="radio"/> Customer (provide sample for manufacturing)	
<b>OPTIONS (please check if needed)</b>		
<input type="radio"/> Sample Cooler Additional Data Needed, Please complete heat transfer document		
<input type="radio"/> PipeStand for Mounting System		
<input type="radio"/> SENSOR Needle Purge		
<input type="radio"/> Secondary Sample Isolation Valve		
*Enclosure Type Insulated <input type="radio"/> Yes <input type="radio"/> No		
Heated <input type="radio"/> Yes <input type="radio"/> No if yes, <input type="radio"/> Steam or <input type="radio"/> Electric if electric, Volts _____		
<input type="radio"/> Process Block Valve <input type="radio"/> Sample Inlet <input type="radio"/> Sample Outlet <input type="radio"/> Both		
<input type="radio"/> Check Valve on Vent		
<input type="radio"/> Non-standard Process Needle (.083std) <input type="radio"/> .109 <input type="radio"/> .148 <input type="radio"/> 1/4" Stinger		
<input type="radio"/> Steam Stinger		
<input type="radio"/> Fixed Volume Size <input type="radio"/> oz. <input type="radio"/> mL (if applicable)		

\*Required information

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





# 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**

## 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**

## 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

## 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](http://SENSOReng.com)

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