



The SENSOR Basic Bottle Sampling System (BBSS) is designed for safe and reliable closed-loop “grab” sampling of liquids at process pressures less than 150 psig (10 bar). The SENSOR sample valve is designed to operate under continuous flow via a bypass or parallel line off the main process piping. With inclusion of the optional Needle Evacuation System (NES), the BBSS provides for complete removal of sampling residue from the ID of the Process Needle, therefore preventing plugging and cross-contamination between sampling operations.

## Features and Benefits

- Highly customizable based on process conditions and operator requirements
- Primary Flow-Thru Sample Valve features a side-ported needle valve with packing below the threads; ensuring that the stem will not seize due to process build up.
- Side-ported Vent Needle prevents plugging of vent port
- 316L standard material; other materials available
- Replaceable Process and Vent Needles
- Non-metallic bottle shroud protects operator in case of shattered bottle
- Operation and Installation Manual for each system



## Materials of Construction

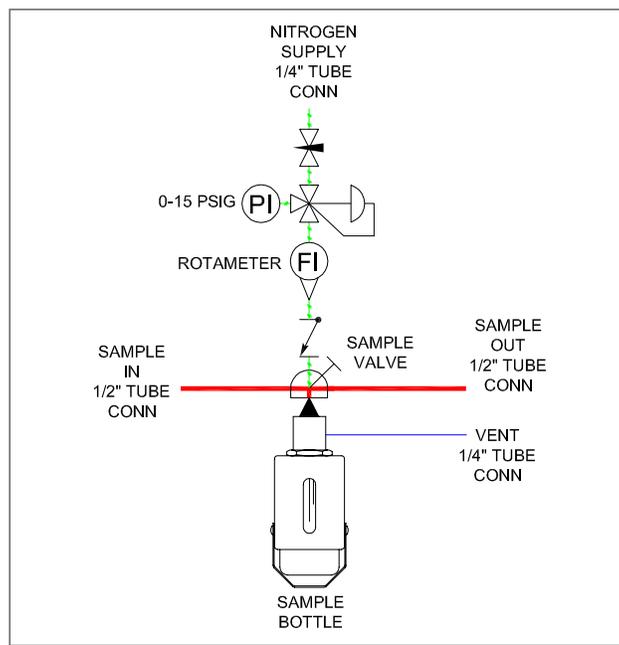
Sample Loop	316L Stainless Steel
Sample Valve	316L; 1/2" flow port
Process Needle	316SS; .083" - .148" OD
Vent Needle	316SS; .083" OD
O-Ring Material	Viton standard; optional Kalrez
Seal Material	Teflon
Bottle Shroud	PVC; 2 oz. - 32 oz.
Retaining Strap	Stainless Steel
Mounting Plate	Stainless Steel

**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	
Evacuation System (NES)	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 Needle Evacuation System (NES).



# Bottle System Application Data Sheet



Date	
Name	Phone
Company	Email

## GENERAL

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	For 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

## MATERIALS

*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)		

## 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 _____

## CONTAINER

Size	
*Material	<input type="radio"/> Glass <input type="radio"/> Plastic <input type="radio"/> Safety Coated Glass <input type="radio"/> Other _____ *specify
*Sampling Method	<input type="radio"/> Septum Bottle (closed loop, captured vent) <input type="radio"/> Open Top Bottle
*Type	<input type="radio"/> Boston Round <input type="radio"/> Customer (provide sample for manufacturing)

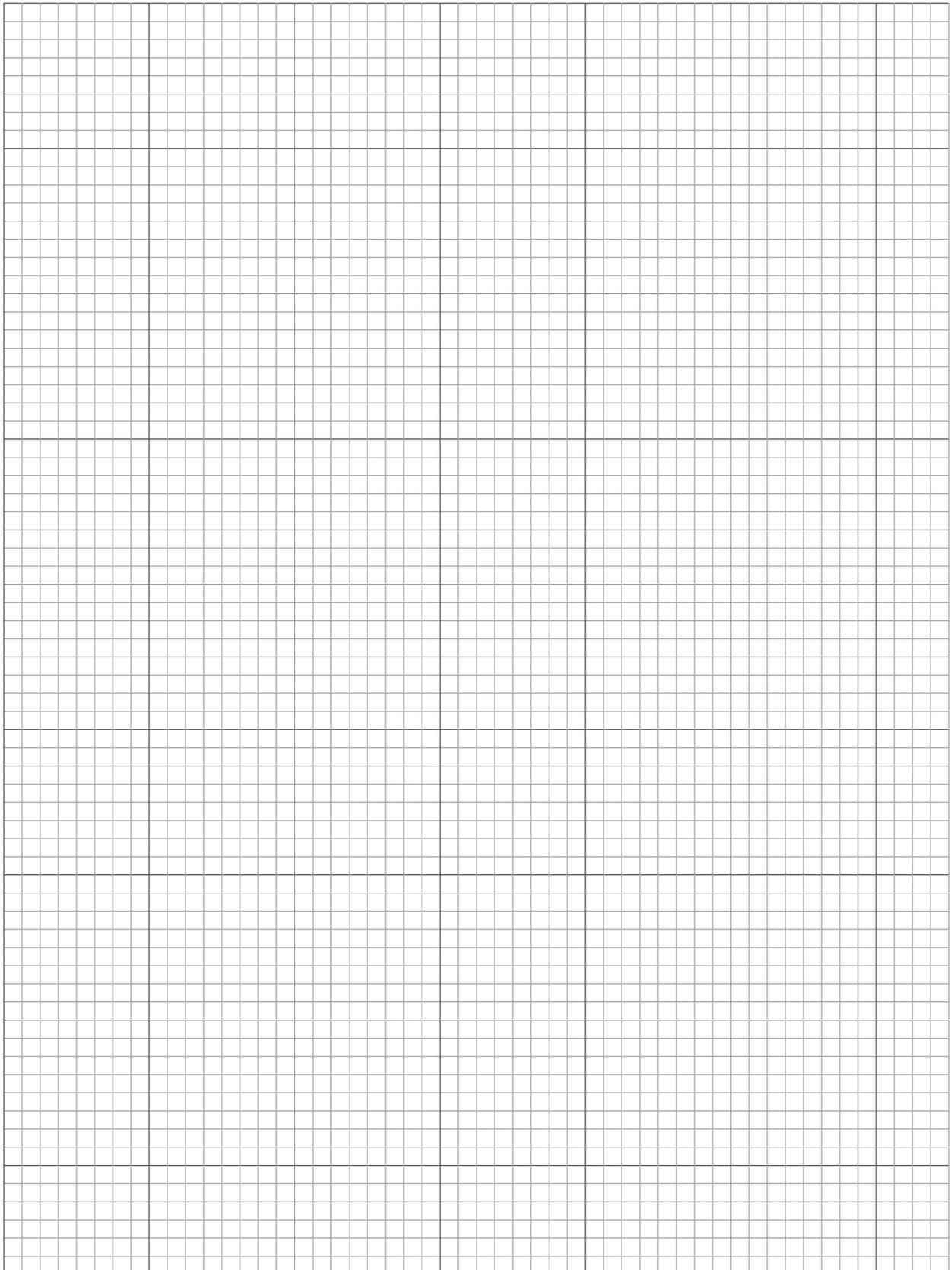
## OPTIONS

<input type="radio"/> PipeStand for Mounting System
<input type="radio"/> Needle Evacuation System (NES)
<input type="radio"/> Secondary Sample Isolation Valve
<input type="radio"/> Sample Cooler Heat transfer document needed.
<input type="radio"/> 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"/> Collection Vessel Size <input type="radio"/> oz. <input type="radio"/> mL (if applicable)

Use page two for any comments/include sketch if available.

\*Required information

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





## **BBSS**

### Basic Bottle Sampling System

- Simple, flow-thru valve design
- Zero dead volume
- Replaceable process and vent needles
- Available with SENSOR Needle Evacuation System (NES)



## **LGSS & VSS**

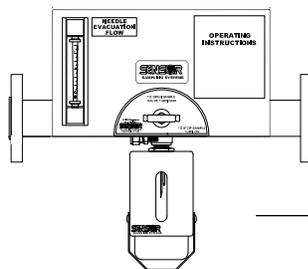
### Liquefied & Vapor Gas Sampling Systems

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

## **PIBSS**

### Pressure Isolating Bottle Sampling System

- Guarantees repeatable sample volume
- Zero dead volume
- Replaceable process and vent needles
- Suitable for high process pressures
- SENSOR Needle Evacuation System (NES) standard



## **ISS**

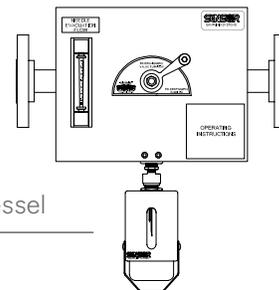
### Inline Sampling System

- 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

## **RSS**

### RAM 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
- Can be provided with a variety of connections to mate up to existing piping or vessel





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**REGIONAL OFFICES**

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