



Manual Continuous Sampling Systems

Texas Sampling Incorporated's lowest priced basic system, the Manual Continuous Grab Sample System, is a closed-loop sampler that is ideal for a wide variety of sampling applications. All Manual Continuous Sampling Systems collect emission free, representative samples of process while ensuring operator safety. Easy to install and operate, the sample dispenses into the sample bottle by merely opening a valve. Process pressure pushes the sample through our patented valve design into the bottle via a needle. With optional Process Needle Purge, zero dead volume is ensured.

MSD - Manual Continuous



The MSD - Manual Continuous System features a three-way ball valve for traditional grab samples by rotating valve handle 180 degrees. The MSD Sample System is typically used for low pressure and temperature applications.

MD - Flow Thru



The MD - Flow Thru System consists of a robust sample valve that allows for continuous flow through a 1 / 2" orifice. The rising stem style sample valve allows the operator to control the flow of the sample being dispensed into the sample bottle. This system can be used for higher pressures and temperatures where a continuous flow loop is desired or viscous process is encountered. This sample valve is available in a variety of materials including chemical resistant plastics.

Manual Continuous Sampling Systems - Model Number Specifications

Type of System

MDS 1/2" Flow Thru

MSD 1/4" Manual Continuous

Needle Size

- A .083" process/.083
- B .109" process/.083
- C .148" process (TFE coated) /.083
- D .203" process (TFE coated) /.083
- E Stinger 1/4" tube

Shroud Size (includes PVC sleeve for Boston Round-style bottle (if different please provide customer bottle))

- 02 2 oz.
- 04 4 oz.
- 08 8 oz.
- 16 16 oz.
- 32 32 oz. (doesn't require PVC sleeve)
- F Special
- R RVP (assembly includes special needles and shroud)
- X No shroud

Process Needle Purge

- A With PNP (includes check valve, regulator, rotameter, pressure gauge & block valve)
- M Manual purge (includes hand pump check valve & bracket)
- F Flush and purge (same components as PNP plus 3-way ball valve)
- X Without PNP

Sample Isolation / Double Block Valve

- P Standard isolation valve
- R Isolation valve with spring-return handle
- X Without

Process Connections

- A Up to 3/4" x 150# flange
- B 1/4" (standard for MSD) or 3/8" tube connection
- S 1/2" tube connection standard on MD

Block Valves

- A Process block valve ball type (for use with temperatures up of 350°)
- B Needle valve
- C Other process block valve
- D Check valve w/Viton
- X Without

Vent Options

- E Emission filter (activated carbon in SS Canister)
- C Emission filter (with crystals to indicate when carbon needs changing)
- X Without

Pipe Stand

- PS Pipe stand (2" x 60" galvanized with 10" x 10" base)
- X Without

Enclosure (all 304 SS with window)

- N Non-insulated w/window
- IE Insulated with electric heater
- IS Insulated with steam or glycol heating coils
- BI Bottle enclosure (non-insulated)
- X Without

Coolers (high-efficiency coolers designed to customers requirements – includes TV & TI in thermowell, H₂O block valves, plate mounted)

- CX Process Cooler * Please contact Texas Sampling for proper sizing
- X Without

Miscellaneous

- K Kalrez o-ring on check valve for PNP or Vent
- F Specify fittings other than standard Hoke
- X None

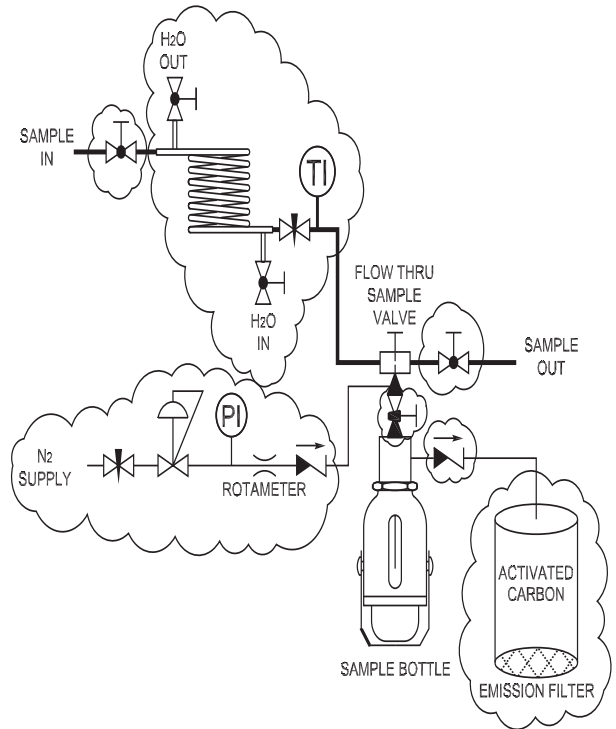
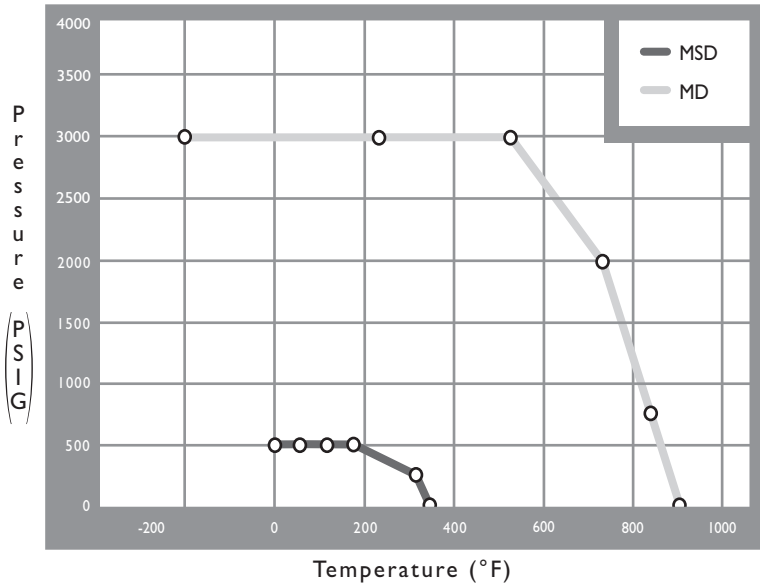
Recommended for process temperatures over 130°F. Cooler data sheet must be submitted for proper sizing.



Manual Continuous Sampling Systems - Technical Data

System Design Specifications	Type	Pressure	Temperature
	MSD	500 PSIG	350° F
MD	3000 PSIG	900° F	

Pressure vs. Temperature



What is Process Needle Purge (PNP)?

Process Needle Purge refers to the system clean-out after the sample has been collected. Pressurized nitrogen purges the sample from the process needle, eliminates plugging of all components, allows the operator to check if the vent line is open, and provides a clean, representative sample. The PNP components include N₂ block valve, regulator, check valve, pressure gauge, and rotameter.

Manual Continuous 1/4" 3-way and 1/2" MD Flow Thru Sample System with standard equip includes

- wetted parts are 316 SS, Teflon, and Viton
- 3-way sample/bypass valve (MSD)
- 1/2" flow thru sample/bypass valve (MD)
- .083" dia. process needle/ .083 dia. pencil point needle
- shroud assembly for 8 oz. Boston round bottle
- system mounts on 304 SS panel with folded edges for pipe or pole mounting, includes 2" pipe clamps
- system and procedure tags
- process connections are 1/4" tube for MSD and 1/2" tube for MD
- installation and operation manual with spare parts

MD - max design temperature: 450°F @ 1500 PSIG

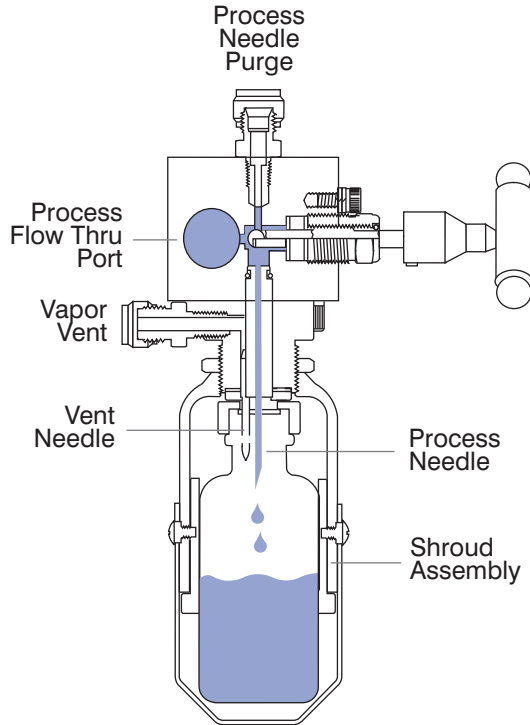
MD - max design pressure: 3000 PSIG @ 220°F

MSD - max design temperature: 350°F @ 100 PSIG

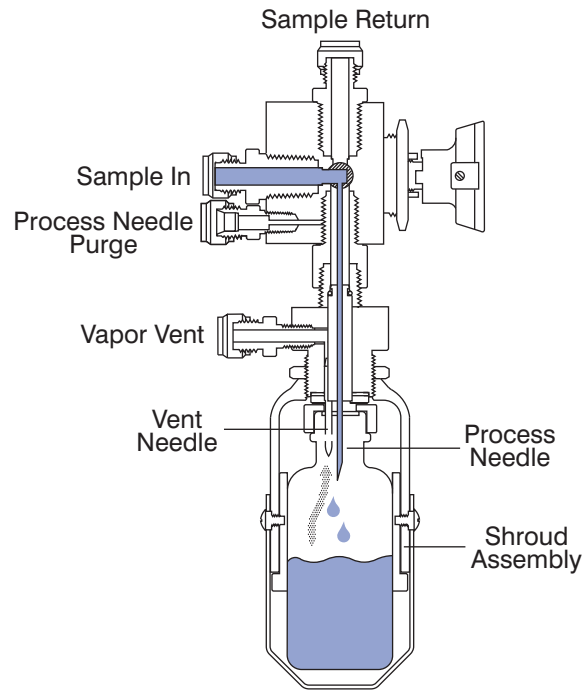
MSD - max design pressure: 500 PSIG @ 150°F

Note: For pressures over 150 PSIG at sample point please refer to Fixed Volume Sample Systems.

MD Valve in Sample mode



MSD Valve in Sample mode with PNP



Features & Benefits

Replaceable Process Needle

- Easy to remove with minimal cost for single replacement needle

Replaceable Pencil Point Vent Needle

- Virtually eliminates vent needle plugging that causes over-pressuring of sample bottles

Shroud Assembly with Viewing Slot

- Allows operator to see sample as it is filling the bottle
- Protects operator in the event of a broken bottle

Removable Sleeve

- Allows customer wide choice of sample bottles
- Guides sample bottle so needles will hit center of septum

Installation/Operation Manual

- Provides vital information for installation, operation, and maintenance including spare parts diagram

Modular Design

- Allows for easy component addition such as secondary isolation valve or replacement



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