



# MODEL MLG CLOSED LOOP CYLINDER SAMPLE PANEL

***Safe and Accurate Sampling of  
LPG and Liquefied Gases***



**CLOSED LOOP CYLINDER SAMPLE PANEL - LPG**

## **Features**

- Allows for flushing of sample panel and cylinder to increase sample accuracy without discharge to the atmosphere or wasting product
- 6-port/multi-function tandem valve simplifies operation and reduces valve maintenance
- Ergonomic design reduces turning torque and eliminates repetitive wrist action

## **Options**

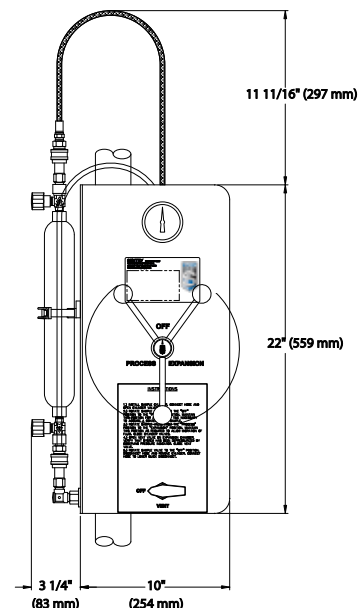
- Connection sizes from 1/4–1/2" (8–15 mm) and are Comp, SW, FLG or NPT
- Outage tube in sample cylinder in lieu of expansion chamber\*
- Valve package for applications without process return
- Various cylinder sizes, special alloys, and corrosion resistant coatings
- Flat panel surface-mount design

\*Note: this option requires manual venting of the cylinder to atmosphere after removal to reduce fill density prior to transport

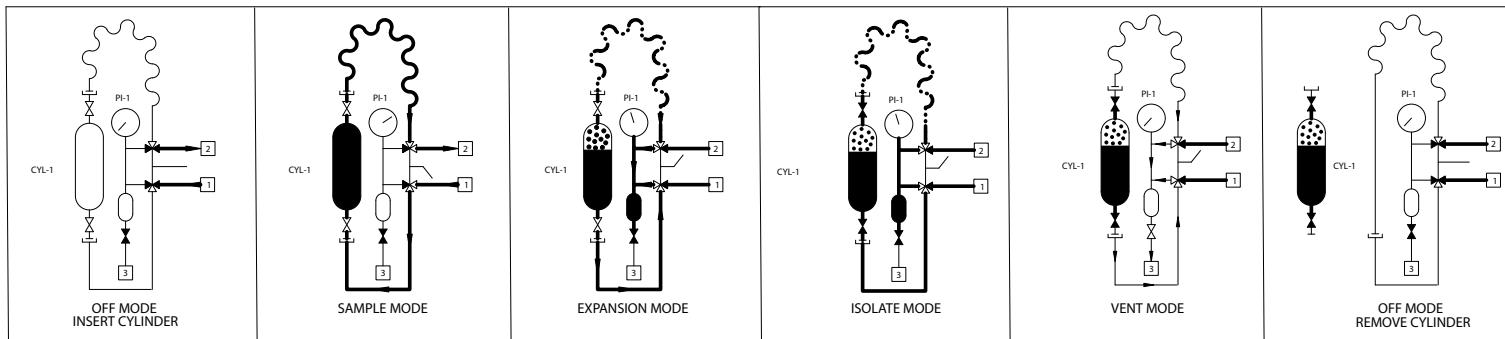
## **Description**

Cylinder sample panels are the traditional method of sampling LPG and other 2 phase liquids with high vapor pressures. The Sentry MLG sample panel incorporates a number of features to provide for safe, simple and accurate sampling. The 6-port tandem valve simplifies sampling by replacing multiple valve operations with just one ergonomically-designed valve. It is very repeatable so the sample is always as representative as possible.

By use of the expansion vessel to reduce sample cylinder volume after the sample is captured, both safety (outage space for transport of the cylinder assembly) and sample accuracy and representativity are assured. See the various modes of the sampling process and the description on the back of this sheet.



## LPG SAMPLE PANEL TECHNICAL DATA



**Off Mode (insert cylinder)** — The tandem switching valve handle is turned to the Off position, blocking both side ports on both 3-way valves on the switching valve. There is no flow through the sampler. An empty sample cylinder assembly is placed into the sampler in this mode in preparation for sampling.

**Sample mode** — The tandem switching valve handle is turned to the Sample position and sample flows through the sampler and the sample cylinder assembly. This is essentially a filling/purging process. Note that for LPG (and liquids) the sample inlet to the cylinder is on the bottom. This allows the liquids to push out any old sample or air to the sample return. The pressure gauge shows that system pressure is on the sampler.

**Expansion mode** — The tandem switching valve handle is turned to the Expansion position. This blocks the sample inlet and outlet lines and connects the sample cylinder to the expansion vessel. Since the expansion vessel is at vent/flare/atmospheric pressure, expansion of the liquefied gas into this vessel provides for approximately 20% outage space in the cylinder. The pressure gauge helps validate that the sample pressure has been lowered in the expansion mode. This process is highly repeatable from sample to sample and operator to operator so sample accuracy is greatly improved.

**Isolate mode** — The valves on the sample cylinder assembly are closed, isolating the sample.

**Vent mode** — The vent valve below the expansion chamber is now opened and the vapors/liquids in the sampler lines and the expansion chamber flash to the vent/flare header or local vapor recovery device.

**Off mode (remove cylinder)** — The switching valve handle is turned to the Off position, blocking both side ports on both 3-way valves on the tandem-switching valve. Since the sampler lines are vented, disconnecting the cylinder is safely accomplished at atmospheric or sub-atmospheric pressure at the quick disconnects without contamination to the operator or the environment. The vent valve is closed.

## SPECIFICATIONS

Materials of construction	304 stainless steel backplate; 316 or 304 SS cylinders
Wetted materials	316 stainless steel, PTFE, Viton®
Standard pressure rating	1800 psi (125 bar)
Standard temperature rating*	up to 300° F (149° C)

\*Higher temperatures available — consult factory

**Options:** sample cooler, in-line filter, cooling water valves, carbon canister, check valves, nitrogen purge, flow indicator, cylinder relief valve, rupture disc, pipe stand, heater, and enclosures



It is solely the responsibility of the end-user, through its own analysis and testing, to select products and materials suitable for their specific application requirements, ensure they are properly installed, safely applied, properly maintained, and limit their use to their intended purpose. Improper selection, installation, or use may result in personal injury or property damage.



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