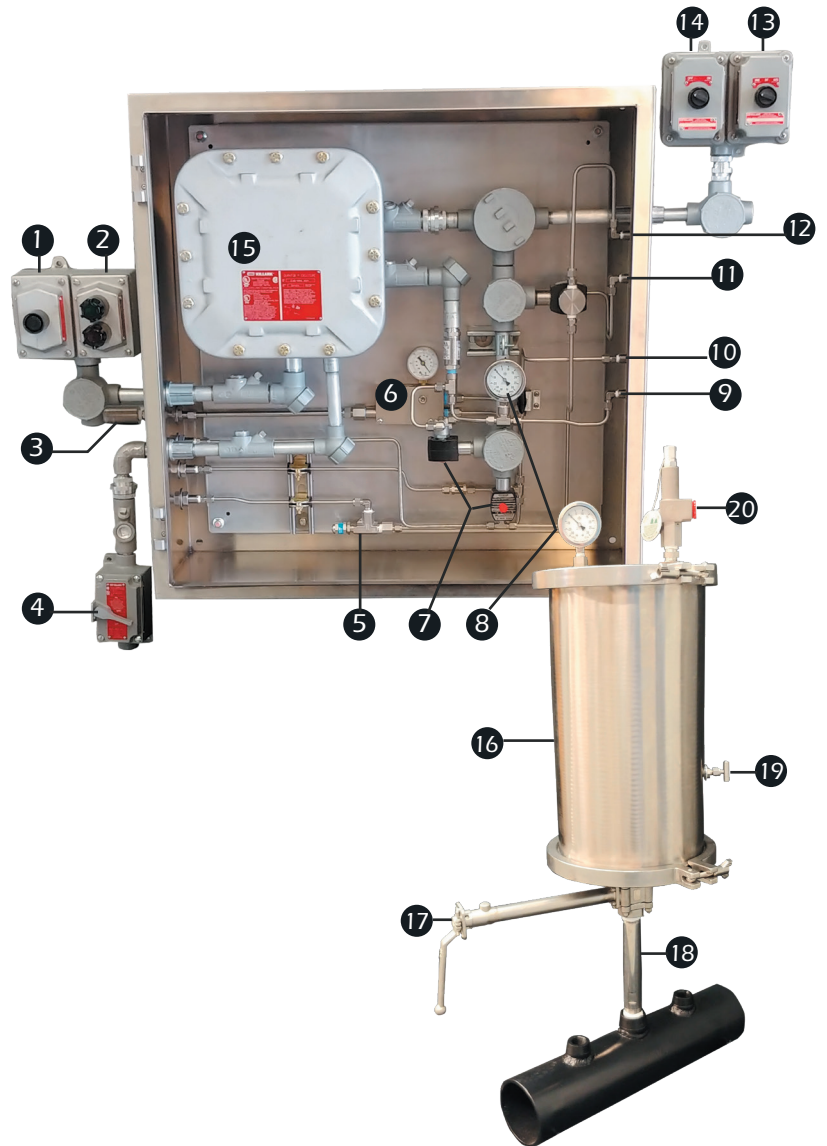




# Mustang Sampling<sup>®</sup>

## Mustang<sup>®</sup> Cryogenic Liquid Composite Sample System

Item Number	Description
1	Local Start / Stop Switch
2	Indicator Lights
3	Venturi Pump Muffler
4	Power Inlet
5	Pressure Relief Valve
6	Venturi Pump
7	Solenoids Valves
8	Vacuum Gages
9	Vacuum Line
10	Sample Cylinder Line
11	Exhaust Valve
12	Actuation Inlet
13	3 Position Pump Timing Selector Switch
14	2 Position Remote/Local Selector Switch
15	Programmable Logic Controller
16	Sample Pump Vacuum Chamber
17	Cryogenic Ball Valve
18	Mustang Certiprobe <sup>®</sup> Sample Extractor
19	Adjustment Valve
20	Pressure Safety Valve



### APPLICATION

The patent pending Mustang Sampling Cryogenic Liquid Composite Sample System provides for efficient takeoff and storage of a cryogenic liquid sample while maintaining phase stability.

The Cryogenic Liquid Composite Sample System extracts a cryogenic liquid sample, such as ethane, butane, propane, or a mixture thereof, for custody transfer. The system maintains the liquid state by applying adequate pressure to insure the sample does not cross the vaporization line (or Bubble Point Curve for a mixture)

on the substance's phase curve as the temperature of the sample increases for storage. A constant pressure cylinder is used to store the composite sample for later analysis.

The sampling process is a cycle which begins with the purging and evacuating of the volumes throughout the system. As sampling commences, small predetermined volumes of liquids are captured and pumped into the sample holder. The sample volume and sampling frequency are configurable. Once the sampling process is complete, the accumulated volume is representative of the entire cycle and can be analyzed. Spot samples may be obtained at any point in the process, concurrently with the composite sample. The cycle can be repeated by replacing the sample cylinders and reinitiating the evacuation process.



## FEATURES

- Temperature controlled enclosure
- SoftView® Composite HMI Software for remote control
- Quick Disconnect Cylinders
- Vacuum Pump Purge
- Compact Design
- Sample Size Selector
- NEMA 4X Enclosure
- Selectable Remote / Local Control

## BENEFITS

- Maintains sample liquid state
- Allows remote or local control
- Facilitates quick and simple cylinder retrieval
- Provides configurable composite sample volume
- Provides Flow Proportional Sampling option
- Requires minimal space

## PRODUCT DIMENSIONS

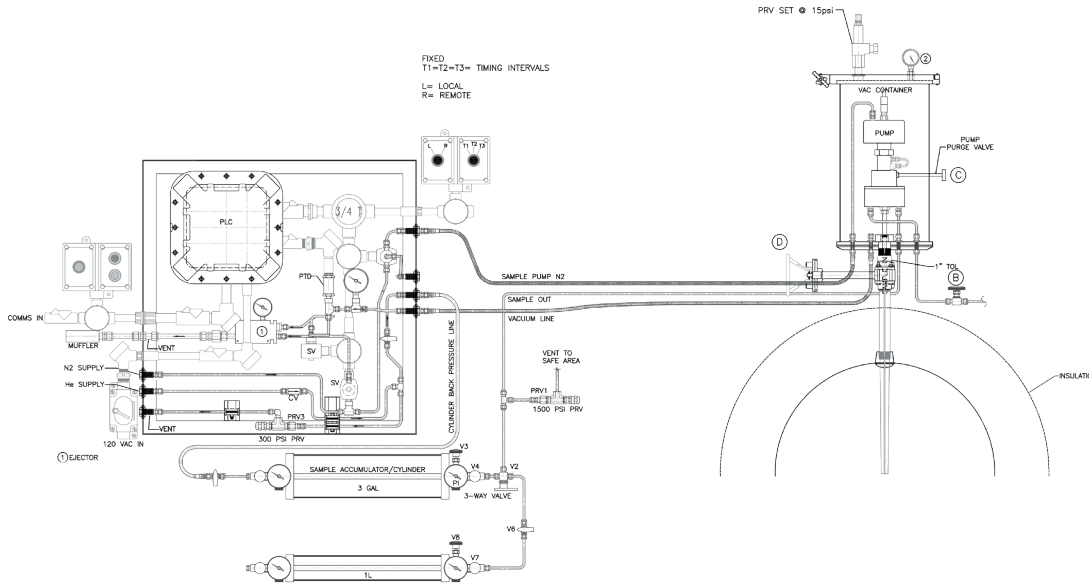


Figure 1- Mustang® Cryogenic Liquid Composite Sampling System

## PRODUCT SPECIFICATIONS

Minimum Process Temperature	-55°F (-48°C)
Allowable Working Pressure Range	10 to 2000 psi (0.68 to 137.9 bar)
Adjustable Composite Sample Volume	0.5 to 3 cc Per Stroke (3 second minimum)
Vacuum Insulated Pump Chamber	316 stainless steel. 304 SS clamps. Viton Clamp gaskets.
Electrical Classifications	Class 1, Division 1 & 2, Groups C, D, T6
Port Sizes	1/4" Tube Fittings 1" NPT Sample Connection
Conduit Connection	3/4" female NPT Power Connection 1/2" NPT Communication Connection
Wetted Materials	Machined Parts: 316 SS/NACE Compliant All other metal parts: SS/NACE Compliant (other materials available upon request)
Input Supply Voltage Options	120 VAC, 100 Watts, 50/60 Hz, ± 10% 240 VAC, 100 Watts, 50/60 Hz, ± 10%

Use the bold alpha-numeric characters from the table above to build your model number:

MCLCSS -             
                  Input Supply Voltage



**About Mustang Sampling**  
Mustang Sampling, LLC is the innovator of Analytically Accurate® solutions within sample conditioning systems. We provide custom solutions of products and services globally to the Natural Gas, Natural Gas Liquids (NGL), Renewable Natural Gas (RNG), Liquefied Natural Gas (LNG) industries including Hydrogen Blending and Carbon Sequestration. Mustang Sampling continues to pioneer integrated control systems, allowing our customers to maintain phase stability from sample extraction at the source through sample analysis. Our products are continuously improved and subjected to the highest quality standards which provides our customers with the best sample conditioning solutions.

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Patent pending.

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