



# MPF Multipoint Sampling System



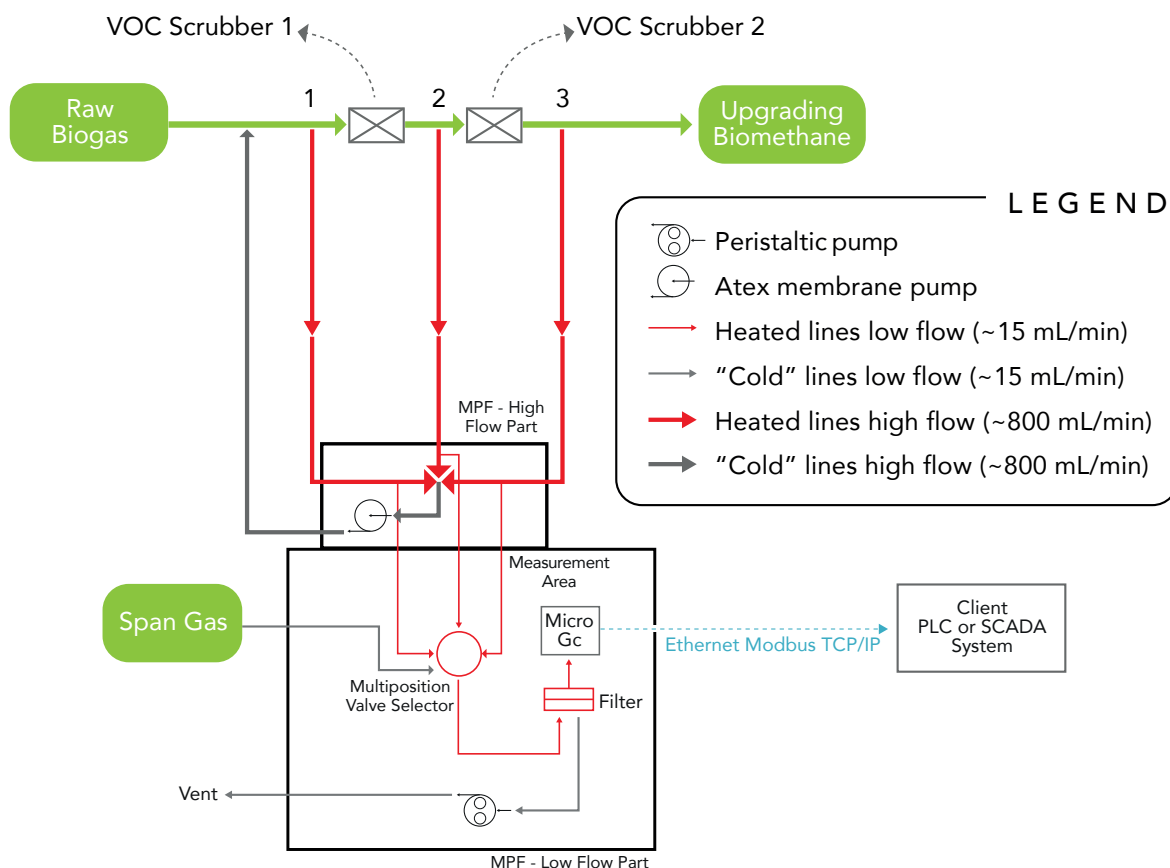
Heated multipoint sampling system for flammable gas MPF, which allows you to transport a representative and reproducible gas or biogas sample, avoiding dangerous false negatives or positives. It also makes it possible to sample gas from 6 points at the same time, to minimize downtime, making analysis faster and more effective. To be combined with gas chromatographs for flammable gases, biogas, or biomethane analysis.

## HOW IT WORKS – HIGH FLOW (FAST LOOP)

The sample flows simultaneously and continuously through the 6 sampling lines thanks to a dedicated diaphragm pump. The gas sampled by the 6 points is then collected and reintroduced into the abatement systems pipe upstream to avoid methane losses in the atmosphere. This part is always installed outdoors.

## HOW IT WORKS – LOW FLOW

The gas is taken selectively from a multi-position valve that connects, one at a time, the high flow sampling lines with the Micro GC. Moisture and impurities are separated from the sample flow by a filter and a peristaltic pump for condensate purge. This part can be installed either indoors or outdoors.



## TECHNICAL FEATURES

<b>Application</b>	Sampling system to be combined with gas chromatographs for analysis of flammable gases, biogas, or biomethane.	
<b>Functions</b>	Biogas sampling, during the purification phases before Biomethane Upgrading. Chromatogram acquisition, calculation of energy values, alarm management, VOCs monitoring, Analog and logical input/output status, data protection, PLC communication and supervision, remote and wireless server.	
<b>Inputs/Outputs</b>	1 x RJ45 (Ethernet cable) WiFi 4G Internet Connection (optional)	
<b>Supported Protocols</b>	Modbus TCP/IP Web APIs (optional, on request)	
<b>Display</b>	TFT 7" touch-screen for connected instrumentation control	
<b>Carrier Gas Connections</b>	2 x Carrier gas inlet: 1/8" OD Swagelok type	
<b>Process Gas Connections</b>	6 x Sample gas inlet 6mm O.D. Swagelok type 2 x Calibration gas inlet 6mm O.D. Swagelok type 1 x Fastloop outlet (collected gas to be fed back into the process) 6mm O.D. Swagelok type 1 x Low Flow sampling and condensate drain outlet	
<b>Carrier Gas</b>	Helium (He) Approximate consumption 6 - 20 ml/min Minimum quality 5.5 ( $\geq 99.9995\%$ ) Pressure: $4.5 \pm 0.5$ barg	
<b>Sample Gas Conditions</b>	Pressure: $0.150$ barg $\pm$ $0.150$ barg Sample rate: 700 - 1200 ml/min for each analysis point (fast loop) Sampling tube temperature: $70$ °C - $120$ °C Free from particulates and liquids	
<b>Data Logging</b>	> 3 years of all analytical data (HHV, LHV, $W_r$ , Z, $d_r$ , gas composition, chromatograms, calibrations, events)	
<b>Filtration</b>	1 x High flow anti-condensation filter 1 x Membrane filter < $2 \mu\text{m}$	
	<b>Outdoor</b>	<b>Indoor</b>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>Rack: IP65 800x800x2100(H) mm</li> <li>Canopy: 1500x1500 mm</li> <li>MPF: 300x500x700 mm</li> <li>Air conditioning integrated</li> </ul>	<ul style="list-style-type: none"> <li>Rack: 600x600x2000(h) mm (indoor)</li> <li>MPF: 300x500x700 mm (outdoor) installed at 120 mm height above ground</li> </ul>
<b>Weight</b>	200 kg	<ul style="list-style-type: none"> <li>Rack: 100 kg</li> <li>MPF: 30 kg</li> </ul>
<b>Operative Temperature</b>	$-20$ °C / $+60$ °C	<ul style="list-style-type: none"> <li>Rack: <math>+10</math> °C / <math>+30</math> °C</li> <li>MPF: <math>-20</math> °C / <math>+60</math> °C</li> </ul>
<b>Power Supply</b>	110 - 240 Vac; 50 Hz (peak <2500W) terminal block	110 - 240 Vac; 50 Hz (picco <2500W) Schuko



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