



T100 Gas Analyzer



Sampling flow to
10-2 mln/min



<10⁻⁴ - 10 bar

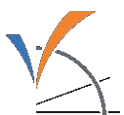


RT - 250 °C

Fields of Application

Catalysis
Fuel Cells
Trace Gas Monitoring
TPD
Process Monitoring
Micro/nano reactor gas analysis
Fermentation

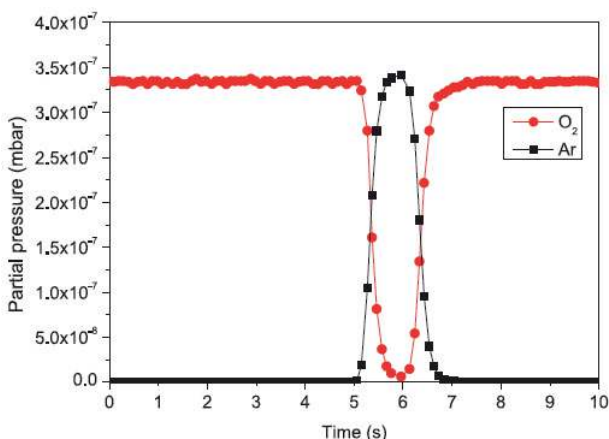
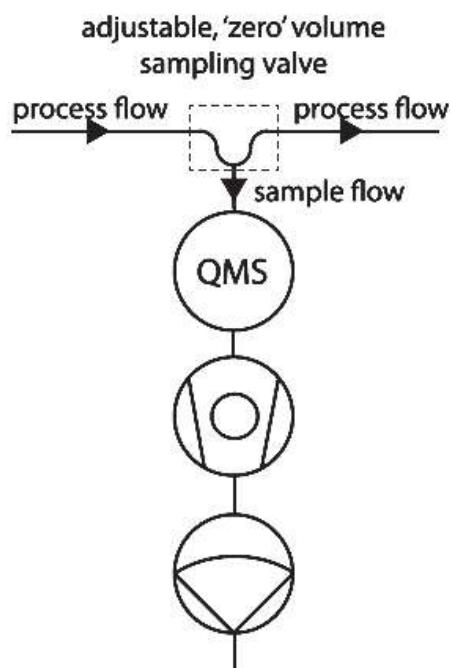
**Bench-top real-time gas analysis system with unique
time response over a large pressure range**



Design and application

The T100 is a bench-top real-time gas analysis system with the unique capability of handling extremely small process flows over a wide range of inlet pressures. The specially designed (high pressure) sampling valve with a **'zero' internal volume** (6 μL) lies at the heart of the T100 system and can be adjusted to the process flow. This allows the system to have an **extreme response time**, making it ideal for analyzing processes that exhibit short pulses or transients. Incorporation of our sampling valve in your process flow provides single stage pressure reduction without the need of bypass flows.

The analysis is done by a quadrupole mass spectrometer with a sensitivity exceeding 1 ppm while only requiring a 10^{-2} mL/min sampling flow. The single stage tunable pressure reduction provides a single solution that works over a large pressure range up to 10 bar. Also the complete system is bakeable in order to obtain low detection background.



Application example: pulse detection

The graph demonstrates the detection of an 80 μL pulse of argon in a process flow of 14 mL/min oxygen at a pressure of 2.5 bar.

The tiny pulse is fully captured; the limited intermixing of the two gasses is mainly occurring in the test system gas lines, which have orders of magnitude more volume than the sampling valve.

Specifications

Inlet pressure (at sampling valve)	< 10^{-4} mbar – 10 bar
Process flow range	Down to 10^{-2} mL _n /min
Sampling flow	10^{-5} – 10^{-2} mL _n /min
Sampling valve heating (optional)	max. 250 °C
Bakeable system	Yes
Refresh time of sampling valve	36 ms at 10 mL _n /min and 1 bar
Mass range	100/200/300 amu
Detector	Faraday cup/Electron multiplier
Scan rate	15-2000 ms/amu
Sensitivity	1 ppm (optionally 100 ppb)