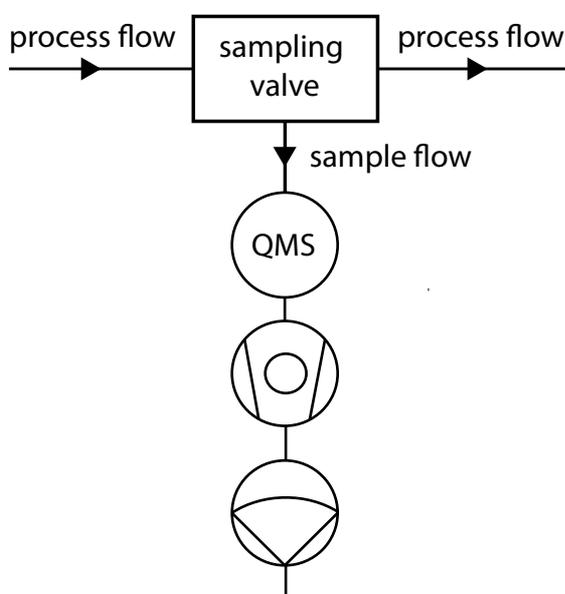


T100 Gas Analyser

Small sampling flow, high time resolution, high sensitivity, large pressure range

The T100 is a bench-top real-time gas analysis system. The T100 systems is unique in its capability to handle extremely small process flows over a large range of inlet pressures. Our specially designed sampling valve with minimal internal volume lies at the heart of the T100 system and provides unmatched response time as well as time resolution. Incorporation of our sampling valve in your process flow provides single stage pressure reduction without the need for bypass flows.



Applications

Online gas analysis for:

- Catalysis research
- Fuel cell research
- Trace gas monitoring
- Process monitoring
- Micro/nano reactor gas analysis

Advantages

The T100 only needs a 10^{-2} mln/min sampling flow to achieve optimal sensitivity (<1 ppm).

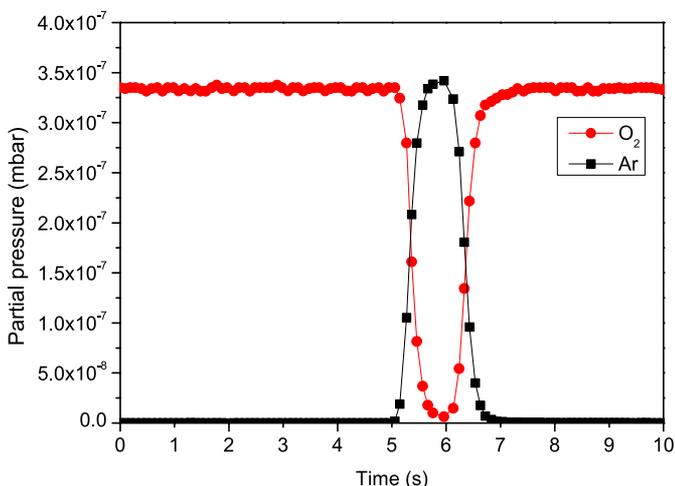
The minimized internal volume of the sampling valve ($6 \mu\text{l}$) ensures a sharp response and the capability to detect small pulses.

The single stage tuneable pressure reduction provides a single solution that works over large pressure range up to 10 bar.

The complete system *including the sampling valve* is bakeable for obtaining low detection background.

Specifications

- Inlet pressure at sampling valve: $<10^{-4}$ mbar to 10 bar
- Process flow range: $<10^{-2}$ mln/min to 50 mln/min
- Sampling flow: tunable from $<10^{-5}$ mln/min up to 10^{-2} mln/min
- Sampling valve heating optional: up to 250°C
- Bakeable analysis chamber for low background signals
- Refresh time of sampling valve: 36 ms at 10 mln/min process flow and 1 bar inlet pressure at sampling valve
- Mass range: 1 - 200 amu
- Detector: Faraday Cup / Electron Multiplier
- Scan rate: 15-2000 msec/amu
- Sensitivity: 1 ppm (optionally 10 ppb)



Detection of a $80 \mu\text{l}$ pulse of Argon in a process flow of 14 mln/min oxygen at a pressure of 2.5 bar.