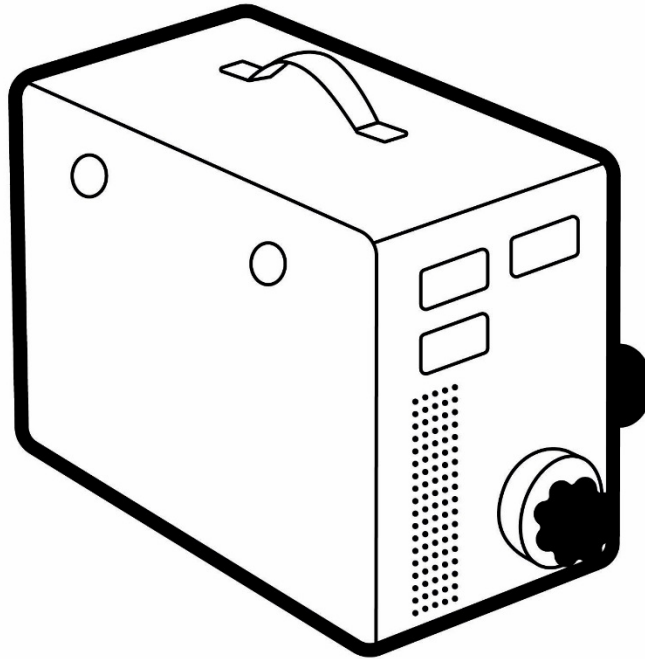


# Portable Sampling System



## Gaset Portable Sampling System

The Gaset portable sampling system has been designed for portable emission monitoring measurements.

The Gaset portable sampling system is used for on-site measurements. It can be used for measuring trace concentrations of pollutants in wet, corrosive gas streams. The sample gas can be measured undiluted and without drying since the sample pump, heated filter and valve are located in a module that is heated to 180 °C. From the sampling system the gases can be directed into Gaset FTIR gas analyzer.

The Gaset portable sampling system includes power connections and temperature controllers for heated lines and heated module. The Gaset portable sampling system is connected to an external PC through Gaset FTIR gas analyzer and can be controlled by Calcmet software.

The function of the portable sampling system is automatic, but sample pump and valve can be controlled also manually.

In the case of a power failure or if the temperature (pump, lines, sample cell) is below setting, the automatic 3-way valve switches sample gas to zero gas to prevent condensation. Sample pump cannot be switched on before all temperatures have reached the setting. In addition, the zero calibration of the Gaset FTIR gas analyser can be done automatically with the portable sampling system.

As an option, the sampling system can be equipped with a sample probe and/or heated lines. The maximum length for the heated line is 19 m + 1 m with 230 VAC and 9 m + 1 m with 115 VAC power supply. There is also an optional integrated O<sub>2</sub> sensor that supplements the capabilities of the Gaset FTIR gas analyzers.

### General parameters

<b>Operating temperature:</b>	20 ± 20 °C, non-condensing
<b>Storage temperature:</b>	-20 – 60 °C, non-condensing
<b>Power supply:</b>	Separate models for 100-115 and 230 V / 50 -60 Hz
<b>Power consumption:</b>	400 - 3600 W, depending of the sample lines (without sample probe)

### Heated sample pump

<b>Material:</b>	316 SS
<b>Diaphragms:</b>	Teflon
<b>Maximum flow:</b>	~4 l/min, constant
<b>Temperature:</b>	180 °C, maximum

### Heated filter

<b>Material:</b>	Bonded microfiber (sintered steel 0.1µ as an option)
<b>Gas filtration:</b>	Filtration of particulates (2 µm)
<b>Temperature:</b>	180 °C

### Temperature controllers

<b>Material temperature range:</b>	0 – 180 °C
<b>Display:</b>	Digital, 3 digits

### Valves

<b>Pressure:</b>	0 - 2 bars
<b>Temperature:</b>	60 °C maximum
<b>Valves:</b>	Sample gas/zero gas

### Gas connectors

<b>Sample gas inlet:</b>	One piece, 6 mm Swagelok
<b>Sample gas outlet:</b>	One piece, 6 mm Swagelok
<b>Zero gas inlet:</b>	One piece, 6 mm Swagelok

### Electrical connectors

<b>Power connection:</b>	CEE7 standard European Schuko plug or fixed cable
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### Enclosure

<b>Material:</b>	SS 316
<b>Dimensions (mm):</b>	400 × 300 × 210 mm
<b>Weight:</b>	12.3 kg
<b>CE label:</b>	EMI guideline 89/336/EC

### Optional oxygen sensor

The O<sub>2</sub> concentration reading can be displayed on the Calcmet software

<b>Principle:</b>	ZrO <sub>2</sub> cell
<b>Measuring range:</b>	0.1 – 25 %
<b>Accuracy:</b>	< 2% from FS
<b>Calibration:</b>	Single point calibration with air

### Optional heated line

<b>Tube size:</b>	4 mm, inner diameter
<b>Core material:</b>	Teflon core
<b>Operating pressure:</b>	Maximum 400 kPa
<b>Temperature:</b>	Maximum 200 °C
<b>Fittings:</b>	6 mm Swagelok
<b>Power supply:</b>	230 VAC or 115 VAC
<b>Power density:</b>	120 watts/meter

The maximum length of the heated line is 19 m + 1 m (230 VAC) and 9 m + 1 m (115 VAC).

### Optional sample probe

**Sample probe:** PSP4000H

- **Power density:** 320 watts
- **Operating temperature:** 0 – 180 °C
- **Filter element:** Ceramic (2 µm)
- **Dust loadings:** < 2 g/m<sup>3</sup>

**Probe tube material:** SS 316 Viton

- **Probe length:** One (1) meter
- **Sample temperature:** 600 °C maximum
- **Sample pressure:** 1 bar maximum

Other probes for high temperatures and for high dust loadings.