



## Vaporiser

- **for injection of liquids, liquefied gases and gas samples**
- **assures sample integrity**
- **high operator safety**
- **expands capabilities of existing analysers**

AN 234WA0718A

GAS offers custom configured GC analysers for many application fields since 40 years. GAS analysers are designed to meet many standardised methods from GPA, ASTM, UOP, ISO, EN and others. The efficient configurations are based on proven GC technology, resulting in robust instruments with an optimal return on investment.

Liquid or liquefied samples are vaporised before injection using the GAS Vaporiser. This convenient laboratory system gives you flexibility and accuracy and expands the capabilities of your analyser. The Vaporiser is used for hydrocarbons and other components up to  $C_5/C_6$ . For higher boiling components we recommend our Sample Securitiser.

## PRINCIPLE

The GAS Vaporiser provides evaporation of liquid and liquefied samples, allowing injection of these sample by GSV (Gas Sampling Valve). A heated pressure regulator assures accurate results by complete sample evaporation and constant output pressure of the gas sample. Figure 2 shows the schematic diagram; a selection valve is provided to choose between gas or liquid inlet. An example chromatogram of liquefied Propane is shown in figure 3. The Vaporiser is used up to  $C_5/C_6$ ; Sample Securitiser is advised for higher boiling components, see the corresponding application note.

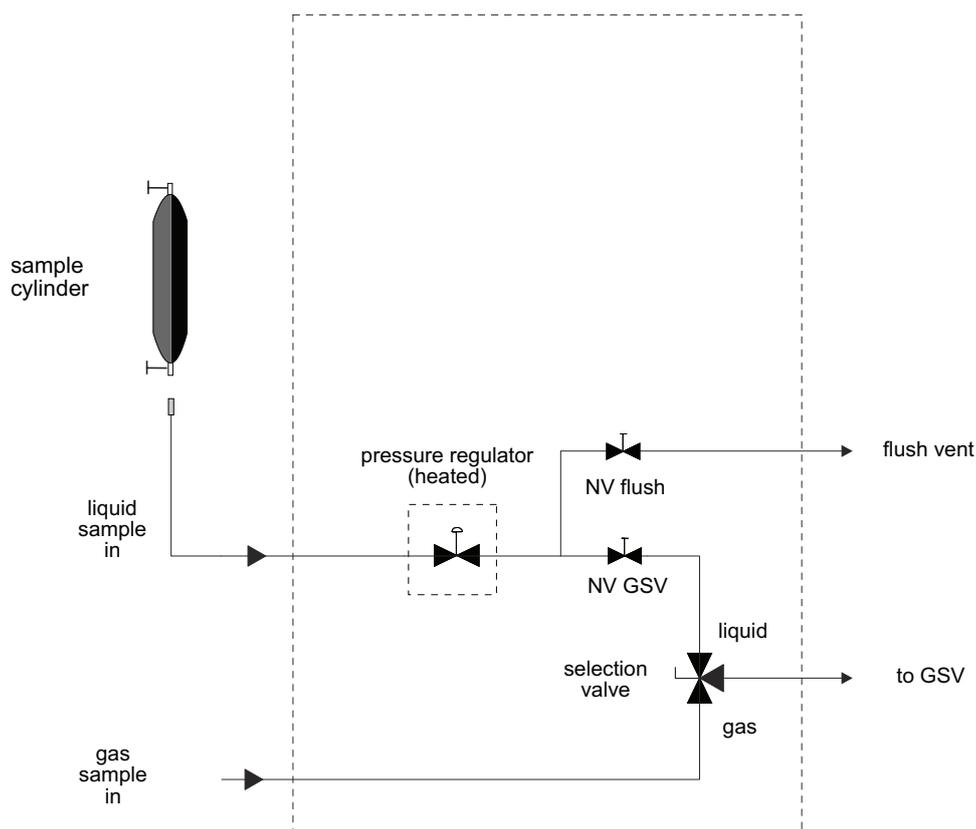


Figure 1. Vaporiser schematic diagram

## EXPANDING ANALYTICAL CAPABILITIES

The Vaporiser expands the analytical capabilities of your gas analyser to liquids and liquefied gases. The use of liquid sampling valves is avoided in this way. This is especially efficient with multichannel analyser systems.



## SAFETY

Handling of liquefied samples needs careful treatment. Both the high pressure cylinders and the flammability of the samples can create hazardous situations. For this reason compliance with adequate directives is required. Vaporiser is tested against Pressure Equipment Directive (PED 97/23/EC) and ATEX Directive (94/9/EC).

Secure placement and connection of the sample cylinder is also a safety matter. Vaporiser is therefore supplied with a robust mounting support, see figure 2.



Figure 2. Vaporiser with mounting support for cylinder

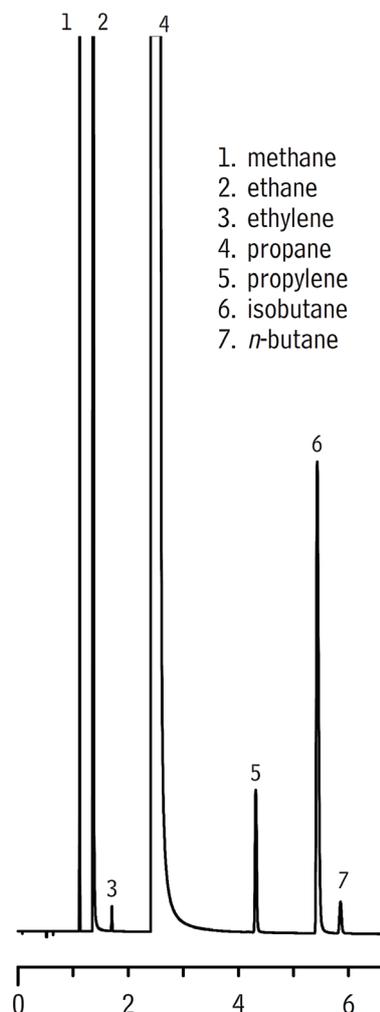


Figure 3. Example chromatogram

## SPECIFICATION

Maximum inlet pressure: 50 bar, higher pressure on request

Maximum temperature: 190 °C

Safety: ATEX 94/9/EC

PED 97/23/EC Clause 3 sub 3

Supply: 240 V AC

Connections (input): Gas: 1/8" Swagelok (others on request)

Liquid (cylinder connection): 1/4" NPT male standard,  
can be extended with various quick connects on request

Connections (output): 1/8" Swagelok, others on request.

Application: Liquids and liquefied gases up to C<sub>5</sub>/C<sub>6</sub>. Sample Securitiser is recommended  
in case of higher boiling components (see the corresponding application note).

Standardised methods: ASTM D2163, D1945, D1946, D2504, D2505, D2593, D2712, D4424, D5303, D6228,

ISO 7941, 6974, 6975, 19739

EN 15984, 27941

UOP 539, 373, 791

GPA 2261, 2286, 2186, 2177

IP 405

Repeatability < 1% RSD



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GAS is an  
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