



INSTRUMENTS
ANALYTICAL SOLUTIONS

R990 POWERFUL AND VERSATILE MICRO GAS CHROMATOGRAPH

A SINGLE ANALYZER FOR NATURAL GAS, BIOMETHANE, HYDROGEN AND ODORANTS

Experience the cutting-edge technology and versatility with the R990 series by SRA Instruments. This innovative gas analyzer, designed with captivating aesthetics and unmatched functionality, sets new standards in analytical instrumentation.

The R990 series gathers the latest advancements in gas chromatography miniaturization from Agilent Technologies, delivering rapid and precise gas mixture analyses in under 3 minutes. Whether utilized in laboratories, research facilities, or production environments, these analyzers excel in facilitating continuous analysis of process gases across different appli-

cations, including gas distribution systems, pilot plants, and small reactors.

Available in desktop, rack 19", and Wall Mounted configurations, the R990 series integrates compact hardware design with modular analysis configurations. Equipped with an on-board computer running the Windows 10 operating system and bespoke chromatographic and process software, accompanied by a vibrant LCD touchscreen, operation is intuitive and continuous. Especially for users requiring metrological precision, the R990M variant is available, certified according to OIML R-140 standards.

Regulatory Context

- **UNI ISO 11885:2022** - Functional characteristics of gas chromatographs with TCD detector installed on gas transport and distribution networks
- **UNI/TS 11537:2024** - Injection of biomethane into natural gas transport and distribution networks
- **UNI 7133-2:2023** - Odorization of gas for domestic and similar use
- **UNI EN ISO 2614:2023** - Analysis of natural gas - Biomethane - Determination of terpene content through µgas chromatography.



Application

<p>Application fields</p> <p>Hydrogen, Odorants and VOC Natural and refinery gas Syngas Biomethane injection plant</p> <p>Petrochemical environment Hydrocarbons Oil & gas prospecting <i>etc.</i></p>	x4 Modular	Integration in cabinet	Automation
	Fast	Open and Safe communication	Robustness and stability

Communication and automation capabilities

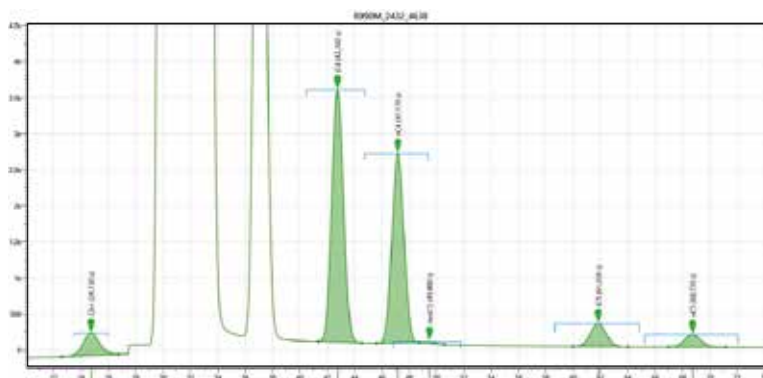
The R990 series transcends conventional boundaries with its robust communication and automation capabilities. In its standard version, it offers versatile options such as Modbus outputs, relays, and analog inputs/outputs, ensuring seamless integration within diverse operational frameworks.

At the heart of its analytical prowess lies a meticulously designed architecture comprising interchangeable modules in-

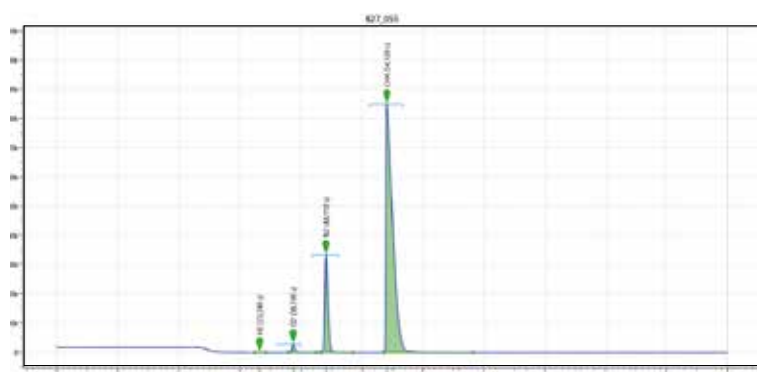
cluding injectors, columns, and detectors. This architecture empowers on-site replacement of individual chromatograph components, streamlining maintenance procedures and minimizing downtime.

With the capacity for up to four modules, each tailored to specific separation requirements, the R990 series embodies adaptability and precision.

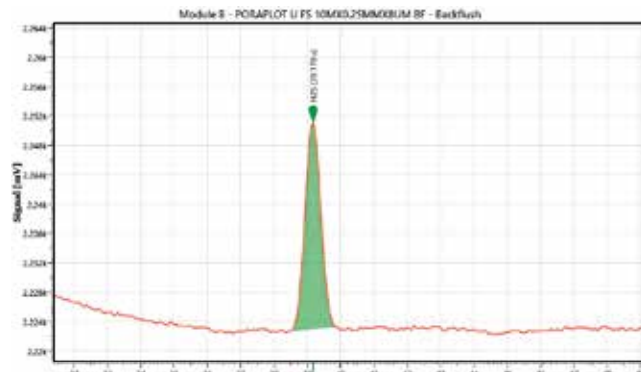
Application examples - Analysis of:



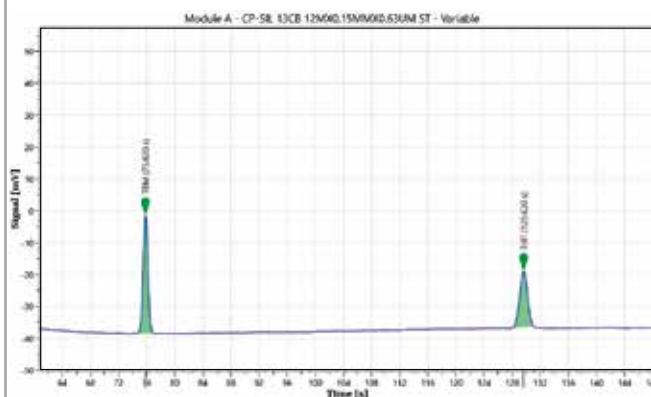
C2 - C6+



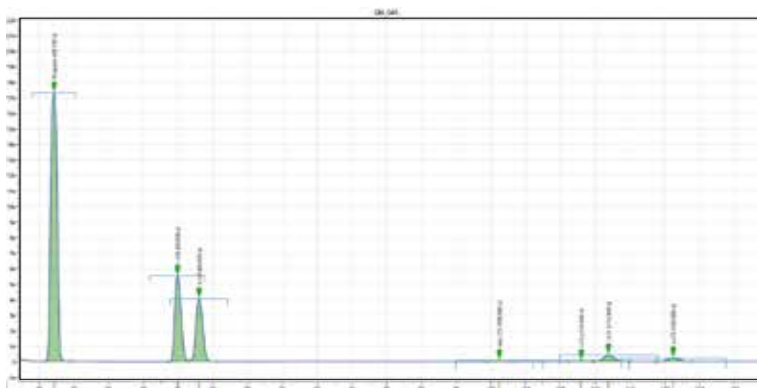
Permanent Gases



H₂S



Odorants THT, TBM



C3-C6 saturated, unsaturated and isomers

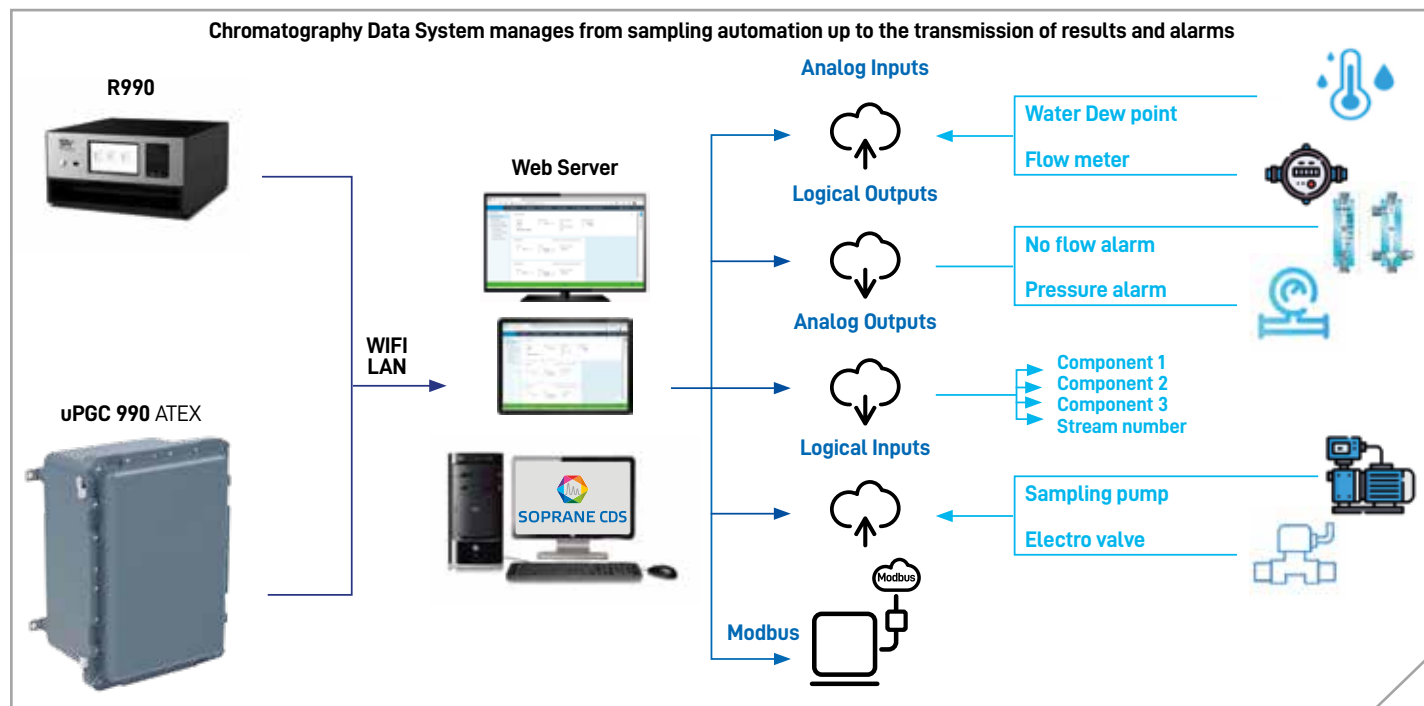
Chromatography Data System

Suitable for MicroGC process applications, Soprane II, developed by SRA Instruments, has a powerful, efficient and easy-to-use graphical environment. Soprane II allows you to define analysis methods and sequences, control valves, manage several streams. Most communication possibilities are supported, such as Mod-

bus, Profibus, analog transmission, alarms.

Alternatively, it will be possible to use the PRO Station software.

This solution makes it possible to have software in Web Server mode accessible through IP address without an internal computer, since it is installed directly on the instrument's mainboard.



R990 Specifications

R990 Main Chassis

- Number of analysis channels: 1 to 4
- Number of internal pumps: 0 to 2

Sample inlet

- 1 or 2
- 1/16" stainless steel inlets (Swagelok type)
- 1 bar relative maximum

Carrier gas

- 1 or 2
- 1/8" stainless steel inlets (Swagelok type)
- 5.5 bar relative maximum

Vents

- 6 maximum
- 1/8" brass outlets maximum (Swagelok type)

Digital input/output

- SUB-D25 female connector
- 2 x Digital input
- 2 x Digital output
- 2 x output relays (24 V 1 A maximum)
- Voltages available: 1 x 5 V - 1 x 12 V (500 mA max)
- Remote signal: 1 x start in - 1 ready in - 1 ready out - 1 start out

Power supply

300W max / 100V -240V / 50-60Hz

Without On Board Computer (Web Server Software)

- PRO licence
- 1x Ethernet
- 3 x USB (1 front panel and 2 back panel) usefull for:
- Wifi
- 2 x SUB D- 9 Male COM 2 and COM 3 RS232/RS422/RS485 ModBus

With On Board Computer

- Windows 10 and SRA Soprane CDS Software

Front panel touchscreen (OBC mandatory)

- Touchscreen 7" TFT - 24 bit - 1024 x 600 pixels
- Display results
- Start analysis

Pressure sensor

- Sample inlet pressure measurement
- Range: -1 to 1.5 bar
- Accuracy: ± 60 mbar

R990 Dimensions and Interface plan

Weight

From 18 to 24 Kg based on Channel Number

Size

448.9 x 221.45 x 495.5 mm

