INSTRUMENTS
ANALYTICAL SOLUTIONS

SRA Instruments to support companies that work with commitment in the energy transition sector.
In line with the European strategy to reduce global warming and its effects, natural gas and gases coming from renewable sources will increasingly play a predominant role in promoting decarbonisation and energy transition.

Process MicroGC SRA R990 declined to the analysis of Hydrogen, Natural Gas and Biomethane

The new SRA R990 Process MicroGC is an analytical platform ready to support energy transition analyzes.

The MicroGC R990 guarantees a constant and continuous on-site measurement of the quality of gases and their energy content, thanks to the combination of the flexibility of modular gas chromatography to the calculation capabilities of SRA Instruments software.
The features of MicroGC technology make possible the simultaneous analysis of the components present in the sample in a range of concentrations from% to a few ppm.

The instrument platform allows a user-friendly experience thanks to a 7 "TFT touch panel display that allows the operator to interact with the main functions of the instrument and see the results of the analyzes on-site. The remote connectivity with TCP / IP, and the internal PC, allow the access to all machine settings and diagnostic operations.

The proprietary SRA Soprane CDS software installed on the analyzers R990 can easily be connected to the most popular industrial communication protocols and measurement systems. Furthermore, simultaneous bidirectional communication is possible through multiple serial ports, or TCP / IP, with acquisition systems and industrial interfaces.

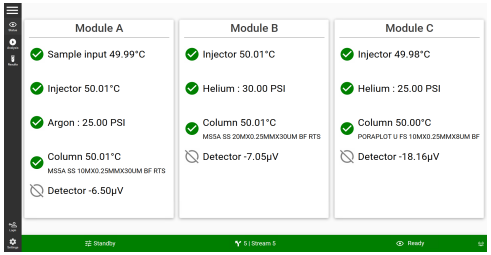
There are 7 configurations dedicated to the analysis of the different types of combustible gases:

- GC#1 – Natural Gas (Nitrogen, CO_2, C1-C6+)
- GC#2 – Natural Gas + Hydrogen + Oxygen
- GC#3 – Natural Gas + Odorant (THT, TBM)
- GC#4 – Natural Gas + Hydrogen + Oxygen + Odorant (THT, TBM)
- GC#5 – Biomethane (Nitrogen, C1-C3, CO_2, CO, H_2S, COS, O_2, H_2)
- GC#6 – Biomethane + Odorant (THT, TBM)
- GC#7 – Hydrogen + Oxygen

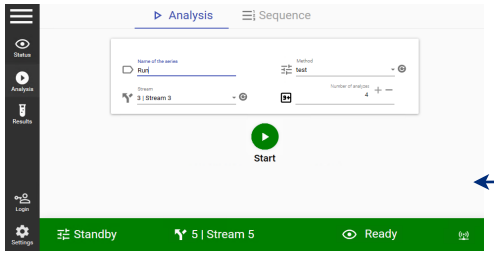
Each configuration is optimized to achieve the required separation and can include from a minimum of 1 to 4 parallel and independent chromatographic channels, each consisting of an injector, high efficiency capillary column and μTCD detector.

	SRA R990 CONFIGURATION						
	GC#1	GC#2	GC#3	GC#4	GC#5	GC#6	GC#7
Components	Natural Gas	Natural Gas + O_2 + H_2	Natural Gas + Odorant	Natural Gas + O_2 + H2 + Odorant	Biomethane + H_2	Biomethane + Odorant	Hydrogen
Methane	60 ÷ 99.9% mol	60 ÷ 99.9% mol	60 ÷ 99.9% mol	60 ÷ 99.9% mol	55 ÷ 100 % mol	55 ÷ 100 % mol	
Ethane	0.0 ÷ 20% mol	0.0 ÷ 20% mol	0.0 ÷ 20% mol	0.0 ÷ 20% mol	0.01 ÷ 15% mol	0.01 ÷ 15% mol	
Propane	0.0 ÷ 8% mol	0.0 ÷ 8% mol	0.0 ÷ 8% mol	0.0 ÷ 8% mol	0.01 ÷ 8% mol	0.01 ÷ 8% mol	
i-Butane	0.0 ÷ 1% mol	0.0 ÷ 1% mol	0.0 ÷ 1% mol	0.0 ÷ 1% mol			
n-Butane	0.0 ÷ 1% mol	0.0 ÷ 1% mol	0.0 ÷ 1% mol	0.0 ÷ 1% mol			
neo-Pentane	0.0 ÷ 0.2% mol	0.0 ÷ 0.2% mol	0.0 ÷ 0.2% mol	0.0 ÷ 0.2% mol			
i-Pentane	0.005 ÷ 0.5% mol	0.005 ÷ 0.5% mol	0.005 ÷ 0.5% mol	0.005 ÷ 0.5% mol			
n-Pentane	0.005 ÷ 0.5% mol	0.005 ÷ 0.5% mol	0.005 ÷ 0.5% mol	0.005 ÷ 0.5% mol			
C6+	0.01 ÷ 0.3% mol	0.01 ÷ 0.3% mol	0.01 ÷ 0.3% mol	0.01 ÷ 0.3% mol			
Nitrogen	0.0 ÷ 20% mol	0.0 ÷ 20% mol	0.0 ÷ 20% mol	0.0 ÷ 20% mol	0.0 ÷ 20% mol	0.0 ÷ 20% mol	
CO2	0.0 ÷ 12% mol	0.0 ÷ 12% mol	0.0 ÷ 12% mol	0.0 ÷ 12% mol	0.01 ÷ 15% mol	0.01 ÷ 15% mol	
CO					≤ 0.1 % mol	≤ 0.1 % mol	
H2S					0.0 ÷ 30 mg/m3	0.0 ÷ 30 mg/m3	
COS					0.0 ÷ 30 mg/m3	0.0 ÷ 30 mg/m3	
O2		0.0 ÷ 0.1% mol		0.0 ÷ 0.1% mol	0.0 ÷ 3% mol	0.0 ÷ 3% mol	0.01 ÷ 5% mol
H2		0.05÷ 20% mol		0.05÷ 20% mol	0.005 ÷ 20% mol	0.005 ÷ 20% mol	95÷ 100 % mol
THT			0.0 ÷ 100 mg/m3	0.0 ÷ 100 mg/m3		0.0 ÷ 100 mg/m3	
TBM			0.0 ÷ 100 mg/m3	0.0 ÷ 100 mg/m3		0.0 ÷ 100 mg/m3	

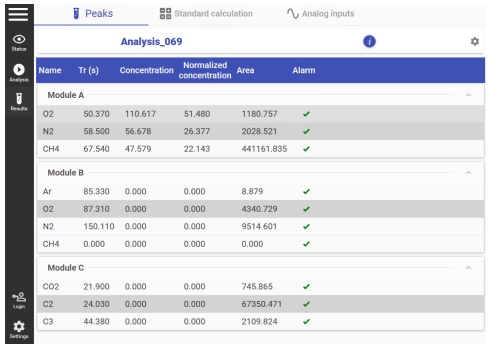
MicroGC R-990 : User Interface



STATUS



START/STOP ANALYSIS



RESULTS

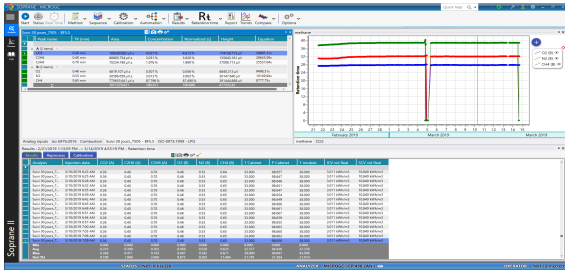
EASY ACCESS TO OPERATING FUNCTIONS VIA TFT DISPLAY

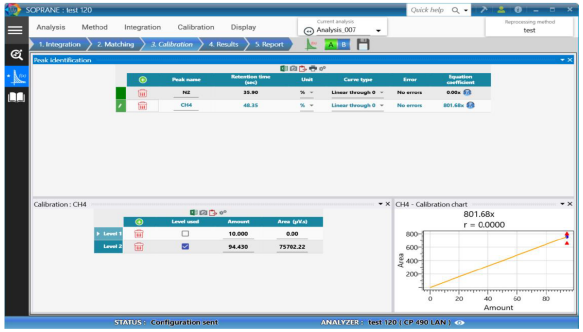
Ethernet connection

ACCESS VIA REMOTE COMPUTER TO THE CHROMATOGRAPHIC AND PROCESS RA SOPRANE CDS SOFTWARE

through MODBUS Ethernet or RS-485 connection

DCS





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