Countum Group

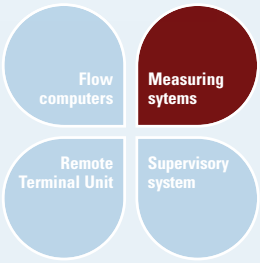
MECI

Metering Solutions

Gas Chromatograph

HGC 303

HGC 303 is a compact gas chromatograph approved for custody transfer. It is capable of analysing 11 different components of natural gas, biogas or specific gas. It calculates and publishes the derived parameters such as calorific value, Wobbe index and density...
Due to the HGC 303 ability to be field-mountable without sacrificing accuracy or reliability, the gas analysis can be made near the sample point greatly reducing such expenses as shelters, air conditioning, heating, and long/heated sample lines.



Small size for easy field installation

HGC 303 has a compact design thus facilitating field installation. In addition, the device can be mounted with a sampling system in the field.

- Low consumption of carrier gas (helium)
- Small compact packaging
- No analyser house is required
- Flameproof certified

Pre-engineered analysis and calculation for Natural Gas Metering

HGC 303 has pre-engineered analysis and calculations for natural gas metering so that no additional programming or application work is required.

- Easy to set up straight out of the box
- Analysis of 11 components and pre-configured value calculations
- Analysis and calculations based on international standards.

Digital communication

This model HGC is capable of supporting Foundation Fieldbus and Modbus protocols and has been tested with leading flow computers.

PC monitoring and online diagnostics

The heat Value Gas Chromatograph Monitor (HGM) is a PC-based software that allows the user to view all data and diagnostic information from a laptop computer.

This man-machine interface software is compatible with Windows Seven, Vista 32 and 64 bit /Windows 2000 and XP.

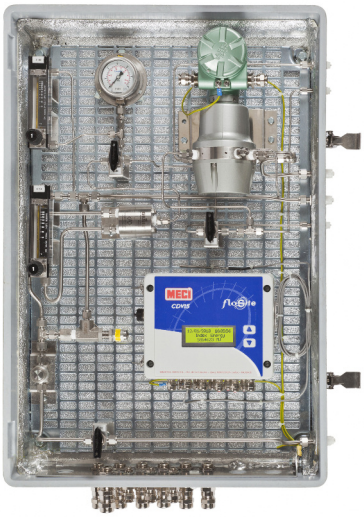
Simple to start-up and easy to maintain

A huge amount of time and cost in the analyzer system start up phase can be saved with the model HGC303's unique packaging and pre-engineered functions.

The unit's easy-to-maintain design contributes to time and cost savings and it can be repaired without the need for analyzer expertise.

Energy and analysis metering package for gas

HGC 303 can be integrated into Meci ready made analysis or energy metering packages. These modular equipments can include fast sampling loop with leak flow detection, carrier gas and calibration gases bottles, flowcomputer, flow metering system…



Technical data - Chromatograph for natural gas

Model		HGC 303		
Applications		Gas quality analysis, control of burners, laboratory measurement, field measurement		
Functions	Analyzed components	11 components		
	Calculated values	Density, relative density, Wobbe index, compressibility factor, superior calorific value, inferior calorific value		
	Number of streams	1 to 4 streams		
	Analysis time	11 components 300 seconds (per stream)		
	Calibration	Manual, semi-automatic or automatic		
	Data storage	Capacity of 18500 records for 64 days		
Gas analysed on standard available for other ranges		**Components** (others upon request)	**Ranges (mol %)**	**Minimum detection (mol %)**
		CH4 (methane)	50-100	-
		C3H8 (propane)	0-15	0.05
		C3H8 (propane)	0-3	0.05
		n-C4H10 (n-butane)	0-1	0.01
		i-C4H10 (isobutane)	0-1	0.01
		n-C5H12 (n-pentane)	0-0.5	0.01
		i-C5H12 (isopentane)	0-0.5	0.01
		neo-C5H12 (neopentane)	0-0.5	0.01
		C6+	0-0.3	0.01
		N2 (nitrogen)	0-20	0.1
		CO2 (carbon dioxide)	0-10	0.05
Standards & performances	Standards	Calculation according to ISO 6974, ISO 6976, GPA 2145-09, 2172, 2261		
	Accuracy	+/- 0.5 %		
	Repeatability	+/- 0.05 %		
Equipment	Detector	Micro TCD (Thermal Conductivity Detector)		
	Internal construction	Body and Oven: cast aluminum - Wet-parts : 304 stainless steel, polyamide - Sensor : Pt, glass, gold		
	Enclosure	Size 100 mm x 115 mm x 244 mm, Weight : 3.5 kg		
	Connections	Electric connections : Cable gland ½ NPT & connecting terminals ; Gas connections: ¼ NPT		
Inputs/Outputs	Digital outputs	1 to 4 for calibration control, stream selection, alarm		
	Serial link	2 RS485 or 2 RS232 or 1 RS485 & 1 RS232 (Modbus protocol) with HDM module, Fieldbus Foundation		
Operating conditions	Temperature	Ambient : -10°C to + 50°C / 14 to 122 F, Storage : -40°C to +70°C / -40F to 158F Oven temperature : 58°C /136F		
	Relative Humidity	< 95% without condensation		
	Analyzed gas flowrate	50 mL/mn +/- 20 mL/min		
	Dust and mist	None		
	Moisture	2000 ppm or less		
	Coexisting components limits	H2< 0.1 mol % , He < 0.1 mol %, Oxygen < 0.1 mol%, H2S (dry)< 0.1 mol %		
	Carrier gas	Helium, purity : 99,99 % or higher, pressure : 400 kPa +/-50 kPa (8 psi +/-7 psi), consumption : 9 mL/min (approximately)		
	Instrument air for valve actuating	Helium, air or Nitrogen - purity : 99,99 % higher -pressure : 58 psi +- 7 psi (400 kPa +- 50 kPa) Consumption : 3 mL/min		
Installation	ATEX area	Ⓔx II2GD EEx dIIC T6		
	Protection class	IP 65		
	Power Supply	24 VDC +/- 15% 4A min		
	Custody transfer approval	According to OIML R140		
	National Approvals	Algeria, Armenia, Austria, Bahrain, Bangladesh, Belgium, Brazil, Bosnia, Brunei, Canada, Chile, Congo, Czech Republic, Egypt, France, Germany, Hungary, Italy, India, Iran, Israel, Japan, Libya, Mexico, Nigeria, Norway, Pakistan, Poland, Portugal, Qatar, Romania, Russia, Serbia, Singapore, South Africa, Spain, Syria, Sweden, Switzerland, The Netherland, Tunisia, Turkey, UAE, United Kingdom, USA, Venezuela.		

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