

Complies with international standards: EN14181, WA CEMS code, EPAs, NGER
Available in IECEx for installation in Zone 1 explosive gas atmosphere

DESCRIPTION

The SmartCEMS® GH2 is a highly reliable stationary process analyser for green hydrogen gas streams primary constituents (H₂ and O₂).

The SmartCEMS® GH2 is designed for online monitoring of H₂ and O₂ (other gases available on demand) in GH₂ and Hydrocarbon Stream and suits a large field of applications such as upstream or downstream of the electrolyser, at mixing stations or injection points, along the natural gas pipeline and at the end user just upstream of burners plants and associated gas treatment centres.

Available for permanent installation or rental, AquaGas ensures full support, from setup to maintenance.



ANALYTICAL PERFORMANCES

TARGET GAS	RANGE RESOLUTION	ACCURACY	TIME T(90)
H ₂ Hydrogen	2000ppm 1ppm	±10ppm abs. or 5%rel.	50s
H ₂ Hydrogen	20000ppm 1ppm	±10ppm abs. or 5%rel.	50s
H ₂ Hydrogen	10% 0.1%	±0.5%abs. or 5%rel	50s
H ₂ Hydrogen	25% 0.1%	±0.5%abs. or 5%rel	50s
H ₂ Hydrogen	50% 0.1%	±0.5%abs. or 5%rel	50s
H ₂ Hydrogen	100% 0.1%	±0.5%abs. or 5%rel	50s
O ₂ Oxygen	20.95% 0.1%	±0.1%abs. or 5%rel	45s
O ₂ Oxygen	100.00% 0.1%	±0.1%abs. or 5%rel	45s
O ₂ Oxygen	25.00% 0.1%	±0.1%abs. or 5%rel	45s
O ₂ Oxygen	100.00% 0.1%	±0.1%abs. or 5%rel	45s

HIGHLIGHTS

- 1 ONLINE MONITORING
- 2 POWERFUL SENSOR CONFIGURATION
- 3 MODULAR AND FLEXIBLE
- 4 COMPACT DESIGN
- 5 ELECTROLYSIS, MIXING STATION, INJECTION POINTS AND MORE
- 6 COST EFFECTIVE

CERTIFICATIONS

O₂, CO: ISO 12039, CTM-030
CO₂: ISO 12039, OTM-13
CH₄: ISO 12039, OTM-13
C_xH_y: ISO 12039, OTM-13
NO, NO₂: EPA Method CTM022
VOC : USEPA Method 21 PID
Flow, velocity, temperature: USEPA method 2C



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CONTACT DETAILS

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Elanora, QLD
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SPECIFICATIONS | Analyser

Dimensions (WxHxD):	240mmx360mmx160mm
Weight:	4kg - 5 kg
Casing's material:	ABS
Protection grade:	IP20
Mounting plate:	596mm(H)x450mm(W) aluminum 1,9 kg
Operation conditions:	T:10°C+50°C, RH:5%+90% (non condensing)
Storing temperature:	0°C - 55°C
Power consumption:	30W max (analyser unit only)
Data logger:	SD flash card max 4GB practically unlimited
Display:	Backlit LCD 20 characters x 4 lines
Gas pump:	Diaphragm max 2l/min std 1.5l/min (90l/h)
Max extr. point pressure:	Atmospheric ±200hPa
Current analogue outputs:	4 outputs 0mA + 20mA or 4mA + 20mA
Digital inputs:	4 outputs 0V + 5V or 0V + 10V
Digital outputs:	2 inputs, TTL levels, floating = high level
Computer com. interface:	B type USB socket

SmartCEMS Multiplexer

Stationary Gas Conditioning Unit

SmartCEMS multiplexer for sequential monitoring of up to 16 sources with user configurable automated sampling sequences.



SPECIFICATIONS | Gas conditioning system

Dimensions (WxHxD):	without filters: 110mmx205mmx160mm with filters: 145mmx240mmx160mm
Weight:	1790g (single filter version)
Drying method:	Water condensation by rapid cooling down
Cooler type:	Based on Peltier cooling element w/ fan (12VDC) Constant, about +1°C, output gas dewpoint about +4°C
Cooling temperature:	5 minutes
Ready to operate after:	T:0°C+50°C, RH:5%+90% (non condensing)
Operating conditions:	-20°C - 60°C
Storing temperature:	100l/h (at inlet gas temp 100°C and RH 100%)
Max gas flow efficient drying:	1 (optionally 2) PA body, PC cover, viton sealing
Gas filters:	42mm 26mm 32mm glass fibre 2µm
Filter insert:	Std: via maMoS power supply (through 3-wire power cable)
Power supply:	Standalone version via external supply module: 85V + 264V AC/24V DC With built-in peristaltic pump
Condensate removal:	38ml/min
Peristaltic pump capacity:	30W
Power consumption:	

MADE TO MEASURE

ENVIRONMENTAL MONITORING AND PROCESS AUTOMATION

Emissions and Process



Industrial and Surface Water



Indoor and Ambient Air



Gas Detection



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