COSMOS MF.H2

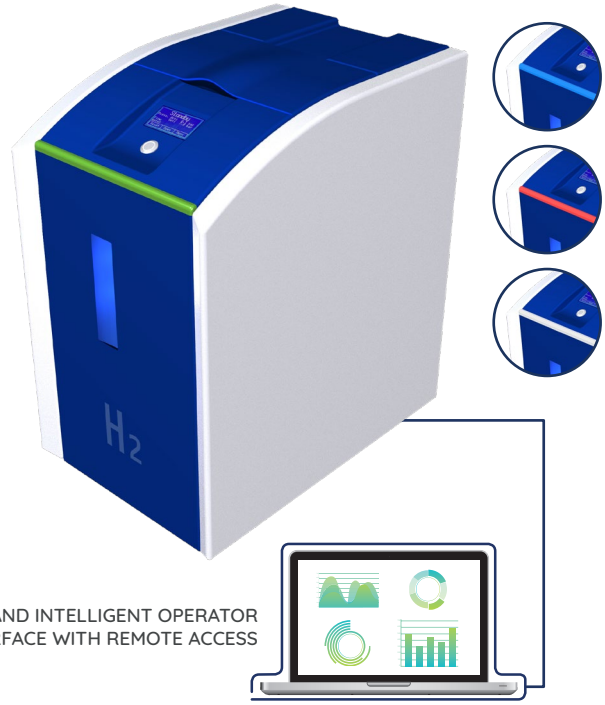
Hydrogen Gas generator for GC/GC-MS

Reference : COSMOS.MF.H2.[Flow rate]

F•DGSi
Innovative Gas System Company

Description

The COSMOS MF.H2 Generator is designed for GC-carrier gas and detectors requiring Hydrogen fuel gas, such as FID, FPD, NPD and TCD.
The Hydrogen gas is produced from deionised water using the **exclusive 100% titanium Proton Exchange Membrane (PEM)** technology, which provides a very high reliability, new longer life and better H2 purity.
The exclusive cold dual dynamic regeneration dryer is completely maintenance free and eliminates all down time for maintenance that is typical of other systems on the market, guaranteeing the best hydrogen purity 24 hours a day.
The automatic checking for internal leaks whenever starting the units and constant control of operating parameters, guarantee maximum safety.
The touch screen LCD interface provides simple and user-friendly management of all functions on the unit.



UNIQUE AND INTELLIGENT OPERATOR INTERFACE WITH REMOTE ACCESS

Applications

GC-MS | GC-FAST | GC-Carrier gas | GC-FID | GC-FPD | GC-NPD | GC-TCD | ICP-MS | THA | Hydrogenation | Fuel cell

Benefits & Savings

IMPROVED CHROMATOGRAPH RESULT

The use of hydrogen as a carrier gas allows :
- Faster and more sensitive than the more expensive helium
- Lower temperature elution, thus extending the life of the chromatograph column
- Run time savings of 25% to 35% without a decline in resolution

INCREASED LABORATORY EFFICIENCY

A constant, uninterrupted gas supply of guaranteed purity eliminates interruptions of analyses to change cylinders and reduces the amount of instrument re-calibrations required.

IMPROVED SAFETY

The very limited internal volume (less than 50 ml) allows safe use of the gas generators where the use of cylinders is risky or prohibited.
The application of tested safety technologies stops the unit in the event of leaks or malfunctions

SIMPLE INSTALLATION

Gas generators can be installed in the laboratory, on or under a bench, eliminating the need for long gas lines from cylinders secured elsewhere.

Standard Features

- **Flow rate : 110, 170, 260, 300, 400, 500, 600, 1000, 1200, 1350 cc/min**
- **Purity > 99.99999%**
- **Exclusive cold dual regeneration dryer : removes both moisture plus oxygen and eliminates the need to monitor, change and purchase desiccant cartridges**
- **Pressure up to 11 bar (160 psi) : suitable for fast and high-speed GC methods**
- **Option : Cold Palladium Catalyst reduces O2 < 0.01 ppm and moisture < 1 ppm**
- **Exclusive 100% titanium electrolytic cell : longer life/better gas purity**
- **LCD touch screen with indication in real time : H2 outlet pressure, H2 flow rate, water quality, water level, auto-diagnostics of breakdown with alarms**
- **LED indicators status (Ready, Stand-by, Alarm, Off)**
- **Remote PC monitoring and diagnostic analysis via USB to interface the unit with customer's PC software (allow to carry out checks and maintenance effectively, only via a remote connection)**
- **Automatic checking for internal leaks to guarantee maximum safety**
- **Capabilities allowing to work in cascading mode**

H2

MODELS	MF.H2. 110	MF.H2. 170	MF.H2. 260	MF.H2. 300	MF.H2. 400	MF.H2. 500	MF.H2. 600	MF.H2. 1000	MF.H2. 1200	MF.H2. 1350
GENERALS INFORMATIONS										
H2 flow rate - cc/min	110	170	260	300	400	500	600	1000	1200	1350
Electrolytic cell	Long life Multilayer PEM technology									
H2 purity	> 99.99999% (O2 < 0.1 ppm, dewpoint H2O < -75°C (-103°F))									
Delivery pressure	1 - 11 bar (14 - 160 psi)									
H2 dryer	Exclusive cold dual regeneration dryer (PSA dryer)									
Cold Palladium Catalyst (Option)	Reduces O2 < 0.01 ppm and moisture < 1 ppm									
Temperature range	From 5 - 35°C (41 - 95°F) and humidity 80% to 25°C (77°F)									
Touch screen	Touch screen (operating parameters, system status, alarms) with LED indicators (Power on/off; ready or errors)									
Dimensions (W x H x D)	27 x 44 x 38 cm (10.5" x 17" x 15")									
Weight (kg/lbs)	17 / 37.5				18/29.6			20 / 44	21 / 46	
Power consumption	100 W	120 W	165 W	205 W		220 W	255 W	385 W	440 W	
Electrical supply	110 - 120 V 60 Hz / 220 - 240 V 50 Hz									
WATER										
Water quality	Deionised, ASTM II, < 0.1 µS Conductivity									
Supply pressure	Max. 6 bar									
Internal water tank	2.3 liters									
External water tank capacity (Optionnal)	5 or 10 liters									
CONNECTIONS										
Hydrogen outlet	1/8 Swagelock									
Water inlet	Quick release push-in fitting									
COMMUNICATION										
USB/PC Control	In series									
RS232/RS485	Option									
SPECIAL FUNCTION										
Cascading mode	Option									
Automatic water tank refill	Option									

ACCESSORIES	Water tank 5 liters	Water tank 10 liters	Hydrogen Sensor for GC-oven
Part Number	water.tank.005	water.tank.006	sensh2.h2.005

Gold Service
Satisfaction Guaranteed

The products are guaranteed 24 months*. Beyond, your investment continues to be supported by our maintenance program **[Gold Service]**. Our wold class technical assistance offers Programmed preventive maintenance to ensure optimal performance of your Gas generator F-DGSi and a priority intervention in case of failure.

***Year 2 of warranty subject to generator being serviced at end of the first year by a F-DGSi-approved agent in accordance with fixed annual maintenance schedule. For full terms and conditions, visit www.f-dgs.com**

GS: TECNOLOGIA APLICADA

Certified Product

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