

# COSMOS MB.H2

Hydrogen Gas generator for GC

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



## Description

The COSMOS MB.H2 generator is designed for GC-detectors requiring H2 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 purity.

**The COSMOS MB.H2 series use a unique static membrane dryer, maintenance free**, which allow to dry the H2 gas and increase the purity.

The automatic checking for internal leaks whenever starting the unit and constant control of operating parameters, guarantee maximum safety.

The touch screen interface provides simple and user-friendly management of all functions on the unit.



UNIQUE AND INTELLIGENT OPERATOR INTERFACE WITH REMOTE ACCESS

## Applications



## Benefits & Savings

### IMPROVED CHROMATOGRAPH RESULT

The use of hydrogen as a carrier gas allows lower temperature elution, thus extending the life of the chromatograph column. Hydrogen as a carrier gas is faster and more sensitive than the more-expensive helium. 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 cc/min
- Purity > 99.9996%
- Pressure up to 11 bar (160 psi)
- Exclusive 100% titanium multilayer PEM cell : longer life/ better gas purity
- Touch screen with indication in real time : H2 outlet pressure, H2 flow rate, water quality, water level, auto-diagnostics of breakdown with alarms.
- Automatic checking for internal leaks to guarantee maximum safety
- 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)
- Compact, space-saving stackable design
- Capabilities allowing to work in cascading mode
  - Higher flow rates up to 6 L/min
  - Automatic flow compensation in the event of unplanned down-time
  - Continuous operation for critical applications

H2

MODELS	MB.H2.110	MB.H2.170	MB.H2.260	MB.H2.300	MB.H2.400	MB.H2.500	MB.H2.600
<b>GENERALS INFORMATIONS</b>							
<b>H2 flow rate - cc/min</b>	110	170	260	300	400	500	600
<b>Electrolytic cell</b>	Long life Multilayer PEM technology						
<b>H2 purity</b>	> 99.9996 % (O2 < 1 ppm, Dew Point < -20°C (-4°F))			> 99.9996 % (O2 < 1 ppm, Dew Point < -30°C (-22°F))			
<b>Delivery pressure</b>	1 - 7 bar (14 - 101.5 psi)			1 - 11 bar (14 - 160 psi)			
<b>H2 dryer</b>	Static membrane dryer, maintenance free						
<b>Temperature range</b>	From 5 - 35°C (41 - 95°F) and humidity 80% to 25°C (77°F)						
<b>Touch screen</b>	Touch screen (operating parameters, system status, alarms) with LED indicators (Power on/off; ready or errors)						
<b>Dimensions (W x H x D)</b>	27 x 44 x 38 cm (10.5" x 17" x 15")						
<b>Weight (kg/lbs)</b>	18 / 39				19 / 42		
<b>Power consumption</b>	75 W	95 W	140 W	180 W	190 W	230 W	
<b>Electrical supply</b>	110 - 120 V 60 Hz / 220 - 240 V 50 Hz						
<b>WATER</b>							
<b>Water quality</b>	Deionised, ASTM II, < 0.1 µS Conductivity						
<b>Supply pressure</b>	Max. 6 bar						
<b>Internal water tank</b>	2.3 liters						
<b>External water tank capacity (Optionnal)</b>	5 or 10 liters						
<b>CONNECTIONS</b>							
<b>Hydrogen outlet</b>	1/8 Swagelock						
<b>Water inlet</b>	Quick release push-in fitting						
<b>COMMUNICATION</b>							
<b>USB/PC Control</b>	N/A			In series			
<b>RS232/RS485</b>	N/A			Option			
<b>ACCESSORIES</b>	Water tank 5 liters			Water tank 10 liters			
<b>Part Number</b>	water.tank.005			water.tank.006			

**Gold Service**  
 — Satisfaction Guaranteed —

The products are guaranteed 24 months\*. Beyond, your investment continues to be supported by our maintenance program [Gold Service]. Our world 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](http://www.f-dgs.com)

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