

# RACK.H2

## Hydrogen Gas Generator 19"

Reference : RACK.[Model version]



### Description

The RACK-H2 hydrogen generators use the **exclusive electrolyte membrane technology (PEM cell) 100% full titanium** to produce high grade purity H2 gas.

The exclusive cold dual dynamic regeneration dryer on RACK.MF series is completely maintenance free and allows continuous operation 24 hours a day. The automatic checking for internal leaks whenever starting the unit and constant control of operating parameters guarantee maximum safety.

The drying system is different following the model :

- **RACK.MB.H2 Series** : use a Drying system : static, maintenances-free
- **RACK.MF.H2 Series** : use an exclusive cold dual dynamic regeneration dryer



### 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

- Two models available :
  - **RACK.MB.H2**: use a Drying system : static, maintenances-free
  - **RACK.MF.H2**: exclusive cold dual dynamic regeneration dryer
- Flow rate: 100 to 1350 cc/min
- Pressure up to 11 bar (160 psi)
- LCD touch screen: with indication in real time: H2 outlet pressure, H2 flow rate, water quality, water level, system status with auto-diagnostics of breakdown with alarms
- Remote PC monitoring via RS232/RS485/USB to interface the unit with customer's PC software (allow the end user to be connected with the manufacturer for remote diagnostics)
- Up to 32 units can be controlled in cascading mode

H2

MODELS	RACK.MB.H2.100 RACK.MB.H2.160 RACK.MB.H2.250 RACK.MB.H2.300 RACK.MB.H2.500 RACK.MB.H2.600	RACK.MF.H2.100 RACK.MF.H2.160 RACK.MF.H2.250 RACK.MF.H2.300 RACK.MF.H2.500 RACK.MF.H2.600 RACK.MF.H2.1000 RACK.MF.H2.1200 RACK.MF.H2.1350
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### GENERALS INFORMATIONS

H2 flow rate - cc/min	100, 160, 250, 300, 500, 600	100, 160, 250, 300, 500, 600, 1000, 1200, 1350
Electrolytic cell	Long life Multilayer PEM technology	
H2 purity	> 99.9996% (O2 < 0.1 ppm, dewpoint H2O < -75°C (-103°F))	> 99.99999% (O2 < 0.1 ppm, dewpoint H2O < -75°C (-103°F))
Delivery pressure	0.1 - 11 bar (1 - 160 psi)	
H2 dryer	Drying system : static, maintenances-free	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	Digital screen with (operating parameters, system status, alarms) with LED indicators	
Dimensions (W x H x D)	(Power on/off ; ready or errors)	
Weight (kg/lbs)	17 / 37.5	20 / 44
Electrical supply	220 - 240 V 50 Hz 110 - 120 V 60 Hz	

### WATER

Water quality	Deionised, ASTM II, < 0.1 µS Conductivity	
Supply pressure	Max. 6 bar	
Internal water tank	300 ml with automatic refill via an internal sucking water pump	
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

Software function (Option)	Up to 32 units can be controlled in parallel mode
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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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