

Hydrogen gas generator

« Serie MD.H2 »

The Hydrogen gas is produced from deionised water using the **exclusive 100% titanium Proton Exchange Membrane (PEM)** technology for H₂, which provides a very high reliability, new longer life and better purity.

The MD.H2 series use a desiccant cartridge that needs to be replaced or refilled when saturated, 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 LCD interface provides simple and user-friendly management of all functions on the unit.

Applications :

- GC-FID • GC-FPD • GC-NPD • GC-TCD
- Hydrogenation • Fuel cell
- ICP-MS • THA



BENEFITS AND 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

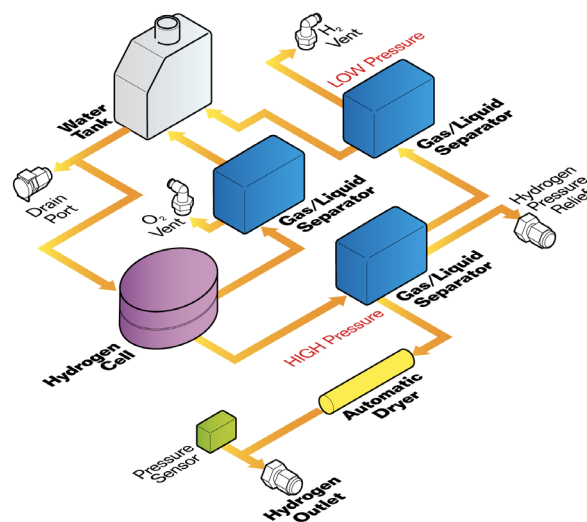
- MD.H2 models available : 100, 160, 250, 300, 400, 500, 600 cc/min
- MD.H2 Purity > 99.9996%
- Pressure up to 7 bar (101.5 psi)
- Exclusive 100% titanium electrolytic cell : longer life/ better purity of gas
- LCD touch screen with indication in real time : H₂ outlet pressure, H₂ flow rate, water quality, water level, system status with auto-diagnostics of breakdown with alarms
- Automatic checking for internal leaks to guarantee maximum safety
- 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)

OPERATING PRINCIPLE

Hydrogen is produced using distilled or deionised water from hydrolysis, through a polymer membrane.

Electrolytic dissociation separates the water into its two main components : hydrogen ready for analytical use, and oxygen that is released into the air. No acid nor alkaline solutions are used in the hydrogen generation cycle.

MD.H2 Series use a unique drying membrane: no dessicant cartridge required.



Models	MD.H2.100	MD.H2.160	MD.H2.250	MD.H2.300	MD.H2.400	MD.H2.500	MD.H2.600
Generals Informations							
H2 flow rate - cc/min	100	160	250	300	400	500	600
H2 purity	> 99.9996 % (O2 < 1 ppm, dewpoint H2O < -55°C (-67°F))						
Delivery pressure	1 - 7 bar (14 - 101.5 psi)						
H2 dryer	Dessicant catridge to refill or replaced when saturated						
Internal water tank	2.3 liters						
Temperature range	From 5 - 35°C (41 - 95°F) and humidity 80% to 25°C (77°F)						
LCD touch screen	Touch screen (operating parameters, system status, alarms) with LED indicators (Power on/off; ready or errors)						
Water quality	Deionised, ASTM II, < 0.1 µS Conductivity						
Dimensions (W x H x D)	23 x 48 x 37 cm (9" x 19" x 14.5")						
Outlet port	1/8 Swagelock						
Weight (kg/lbs)	17 / 37					18 / 39	
Power consumption	280 W					450 W	
Power supply	110 - 120 V 50 Hz / 220 - 240 V 60 Hz						
Communication							
USB/PC Control	In series						
RS232/RS485	Option						
Certification	CE, CSA, FCC						

Gold Service
— Satisfaction Guaranteed —

The products are guaranteed 12 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.

F-DGSI

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