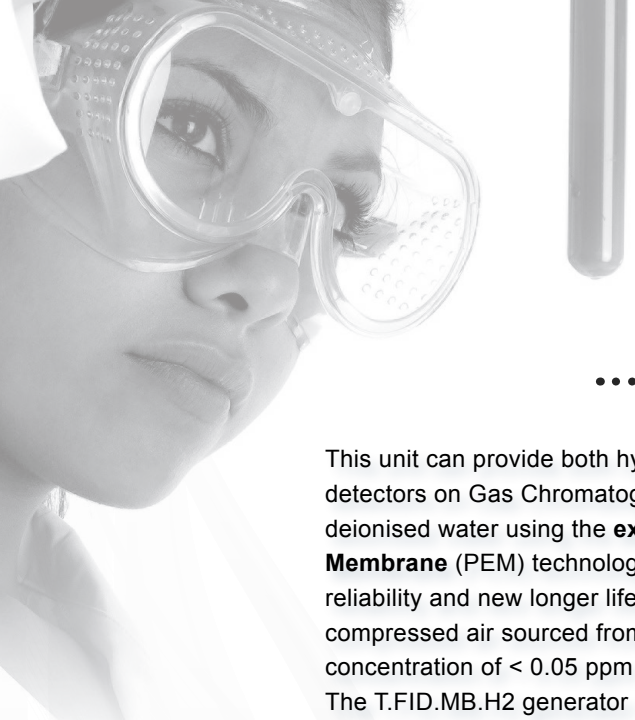

Tower High Purity Hydrogen | Zero Air in one box

« Serie T.FID.MB.H2 »

This unit can provide both hydrogen gas and zero grade air to FID detectors on Gas Chromatographs. 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 and new longer life. Zero air is produced by purifying compressed air sourced from the air network to a total hydrocarbon concentration of < 0.05 ppm (measured as methane).
The T.FID.MB.H2 generator combines the hydrogen serie MB.H2 and Zero air serie ZA generators in one unit. The touch screen LCD interface provides simple and user friendly management of all functions on the unit.

Applications :
• GC-FID • GC-FPD • GC-NPD
• Mud logging application for oil industry

BENEFITS AND SAVINGS

> Improved chromatograph result
The reduction of hydrocarbons on zero air part, including,methane to < 0.05 ppm decreases the background noise level and gives the baseline much better stability, considerably increasing detector sensitivity and ensuring precise analytical results.
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.

> Save money
The unit only requires connection to a suitable socket and to external source of compressed air for the zero air part. The investment can be paid back in less than one year.

> Improved safety
The very limited internal volume (less than 50 ml for H2) 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

• Innovation and unique design: space saving lab bench
• H2 + ZERO AIR: all in one
• LCD touch screen interface

FOR ZERO AIR PART :
• HC < 0.05 ppm
• CO < 0.05 ppm
• Fow available: 1.8; 5 L/min
• External clean and dry air compressor required at maxi. 7 bar (101.5 psi)

FOR HYDROGEN PART :
• Flow rate available : 100, 160, 250, 300, 500, 600 cc/min
• Exclusive 100% PEM titanium cell
• Pressure up to 11 bar (160 psi)
• Hydrogen purity: > 99.9996%
• Drying system: static membrane dryer, maintenances-free
• Built in water tank capacity of 5L: No need of external water tank
• 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)

F·DGSi
Innovative Gas System Company

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.

Zero Air part use three steps to transform ambient air into analytical grade air.

Step 1 : Pre-filtration.
The external oil-free compressor delivers air through a high efficiency filter that traps any particles that may damage the system. The filter has an automatic purge and traps oil, water and any other particles larger than 5 microns in size.

Step 2 : HC and CO trapping
The air leaving the filter enters a high-temperature platinum catalyser, which through oxidation eliminates hydrocarbon molecules down to < 0.05 ppm.

Step 3 : Final filtration
A high-efficiency filter is used to prevent any kind of particles from entering the instrument.

H2 / ZERO AIR ZA part need to be connected to an external clean and dry compressed air source	T.FID.MB.H2.100/1800 T.FID.MB.H2.160/1800 T.FID.MB.H2.250/1800	T.FID.MB.H2.250/5000 T.FID.MB.H2.300/5000 T.FID.MB.H2.500/5000 T.FID.MB.H2.600/5000
H2 / Zero Air flow rate - cc/min	100 / 1800 160 / 1800 250 / 1800	250 / 5000 300 / 5000 500 / 5000 600 / 5000
H2 / Zero Air purity	> 99.9996% (O2 < 1 ppm, dewpoint H2O < -30°C (-22°F)) / CH4 < 0.05 ppm	
H2 delivery pressure	11 bar max (160 psi)	
Air inlet pressure (min/max) Air inlet quality required	Min. 4 bar (58 psi) - Max. 10 bar (145 psi) Max. inlet hydrocarbon content < 100 ppm ; water dewpoint < - 20°C (-4°F)	
Air delivery pressure	0.5 bar (8 psi) less than inlet air pressure	
Internal water tank for H2	5 liters with electronic level control	
Water quality / supply pressure (min/max)	Deionised, ASTM II, < 0.1 µS / - 0.2 bar (3 psi) / 1 bar (14 psi)	
Temperature / Humidity	From 5°C to 35°C (41 - 95°F) / 80% at 25°C (77°F)	
LCD touch screen	Touch screen (operating parameters, system status, alarms) with LED indicators (Power on /off; ready or errors)	
Dimensions (W x H x D)	14 x 49 x 58 cm (5.5" x 19" x 23")	
Outlet ports H2/Zero Air	1/8 Swagelock	
Inlet port for Zero air	1/4 NPT	
Weight (kg/lbs)	23.4 / 51.5	26 / 57.3
Power supply voltage	110 - 120 V 60 Hz / 220 - 240 V 50 Hz	
Noise / IP rating	< 25 dB(A) / IP20	
Communication		
USB/PC Control monitoring	In series	
RS232/RS485	Option	
Software function (option)	Cascading mode	
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 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.

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CE