FID STATION HYDROGEN/ ZERO AIR GAS GENERATOR

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 a Proton Exchange Membrane Technology. 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 H2/AIR FID Station combine the hydrogen serie FID-ILC-H2 and Zero air serie ZA generators in one unit.
Units are complete systems with highly reliable components engineered for easy installation, operation, and long term performance.

APPLICATIONS :

The H2/AIR FID Station series are ideal for:

- Ionization flame detector (FID)

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

FOR ZERO AIR PART :

- flow available : 1,5 L/min
- HC < 0.05 ppm
- CO < 0.05 ppm
- External clean and dry air compressor required at maxi. 7 bar

FOR HYDROGEN PART :

- PEM technologyl
- FLow rate available : 100,140, 180, cc/min
- Pressure up to 7 bar
- Patented gas/water separator electronically controlled
- LCD touch screen :real time outlet pressure, water quality, water level, auto diagnostics with alarms
- Water tank protected and filtered

FID STATION
HYDROGEN / ZERO AIR

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.

LC-H2 Series use a desiccant cartridge which needs to be refilled Or replaced when saturated

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.

Technical Specifications

FID STATION* Note : ZA part need to be connected to an external clean and dry compressed air source.	FID-H2/AIR-100-1500	FID-H2/AIR-140-1500	FID-H2/AIR-180-1500
H2/ Zero Air flow rate cc/min	100 / 1500	140 / 1500	180 / 1500
H2/AIR purity	> 99.9995% / H20 Dewpoint < -55°C, / O2 < 1 ppm CH4 < 0,05 ppm		
H2 Delivery pressure	7 barg max.		
Air inlet pressure Air inlet quality required	Maximum 7 bar Max.inlet hydrocarbo content < 100 ppm ; water dewpoint < -20°C		
AIR Delivery pressure	Up to 6.5 barg		
Internal water tank for H2	1.2 liters		
Water quality	Deionised or distilled > 10MΩ		
Temperature range	From 5°C to 35°C		
LCD touch screen	Resolution 128x64 touch screen (operating parameters, system status, alarms)		
Dimensions (L x H x P)	28 x 43 x 31 cm		
Outlet ports	1/8 Swagelock		
Weight	12 kg		
Power consumption	180 W	200 W	220 W
Certification	CE		

CE

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