

H₂-Air-FID

HYDROGEN + AIR GENERATOR

The H₂-Air-FID is a combined Hydrogen and Zero Air Generator. The Hydrogen Generators employ the newest PEM membrane technology available for electrolytic production of pure hydrogen gas. Only pure water, either distilled or deionized, is required to provide trouble free long-term operation. The no maintenance static dryer has replaced the Molecular Sieve one, making the H₂-Air-FID a **Non Maintenance** gas generator. No caustic solution is needed. The small contained volume (<40 ml) makes it safe for operation in spaces where hydrogen cylinder are restricted. The H₂-Air-FID series produces laboratory grade purified Hydrogen and Air for FID (Flame Ionization Detectors) and other detectors like FPD. This system will generate purified and Hydrocarbon free (less than 0.1 ppm) Air and Hydrogen. The Zero Air requires external oil-free compressed air supply. The H₂-Air-FID can aliment up to 5 GC.

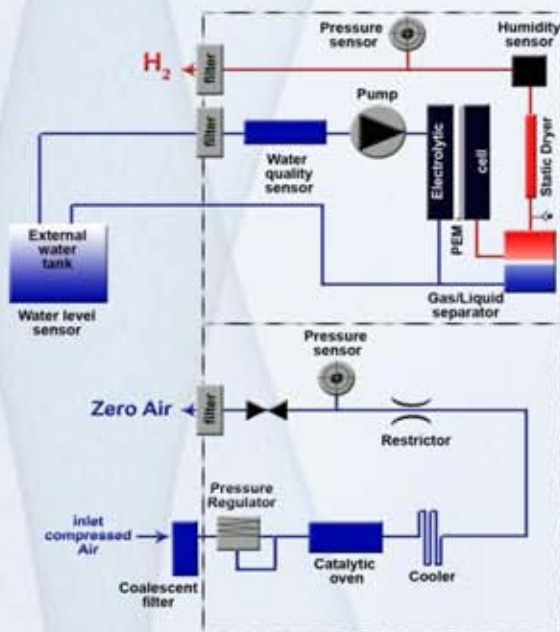


Functioning Hydrogen principle:

The internal long life pump forces the distilled water to flow from the external water tank to the PEM electrolysis cell; mixed with Oxygen, a by-product of electrolysis, the water returns to the tank. On the way to the cell, the water is filtered, deionized through a special cartridge and its conductivity is measured. The humid hydrogen goes through the membrane and is first dried by the gas liquid separator and then by a static Dryer (No maintenance). Then the hydrogen' pressure level is measured and regulated at the set pressure by a feedback of current to the cell.

Functioning Air principle:

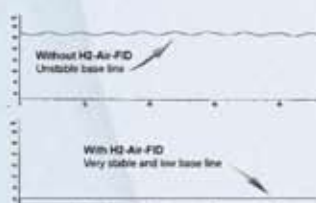
Air is initially passed through highly efficient pre-filtration to ensure that quality air enters the system and does not damage the internal components. The pre-filter removes bulk moisture and larger particles greater than 5 microns in size. After this filtration, the air is pressure regulated. Air is next channeled into a stainless steel catalyst chamber where any background hydrocarbons or carbon monoxide are oxidized. This chamber is filled with a highly efficient platinum + palladium catalyst, heated to very high temperature- to insure hydrocarbon removal to less than 0.1 ppm. A final high-grade filter is used to remove 99.99% of particles greater than 0.5 microns in size.



THE APPLICATIONS

LABORATORY

The H₂-Air-FID Station has been specially designed to aliment the Flame Ionization Detectors (FID) in Hydrogen and Air. Due to its very small size, its no-maintenance drying system and its dual gas Generator, the H₂-Air-FID is the preferred source of Hydrogen and Air fuel gas for GC with FID detectors. With its low Hydrocarbon contents (less than 0.1 ppm as well in H₂ as in Air) the H₂-Air-FID will give excellent and stable base lines to any chromatograph on the market.



Applications are :

- Air and Hydrogen for all FID detectors
- like GC-FID and THC analyzers



SPECIFICATIONS

H2-Air-FID-100	H2 Flowrate : 100 Nml/min / Air Flowrate : 1500 Nml/min
H2-Air-FID-160	H2 Flowrate : 160 Nml/min / Air Flowrate : 1500 Nml/min
H2-Air-FID-250	H2 Flowrate : 250 Nml/min / Air Flowrate : 1500 Nml/min

Purity : **Hydrogen** : Hydrocarbon free < 0.1 ppm / **Air** : Hydrocarbon free < 0.1 ppm
Delivery pressure: **Hydrogen** : 20 - 155 psig / 1.4 - 10.5 barg / **Air** : Up to 7 barg (100 psig) (dep. of the inlet pressure)
Particle filtration level: < 0.1 um
Electrolysis cell: Solid Polymer Membrane type (PEM) Water: Deionized or distilled < 10 uS conductivity
Drying system: Static dryer (No maintenance)
Safety: Auto shut-off / low internal volume of H2 gas (< 40 ml)

User interface: Set points, system status, user parameter / Touch screen / LCD graphic display

Remote command: USB / download of the logfile possible

Dimensions [cm] : 16x35x39 (WxDxH) (without external water tank)

Shipping Dim [cm] : 41x51x50 (WxDxH)

Net weight [kg] : 15 Kg (all models)

Shipping weight [kg] : 19 Kg (all models)

Power consumption [Watt]: Model 100 : 360 W / Model 160 : 410 W / Model 250 : 400 W

Power requirements: 230V/50Hz - 230V/60Hz - 115V/60Hz - 100V/60Hz

ARTICLES, OPTIONS AND SPARE PARTS

6710 03 01X	H2-Air-FID-100
6710 03 02X	H2-Air-FID-160
6710 03 03X	H2-Air-FID-250

Where X=0 for 230V/50Hz or 230V/60Hz

X=2 for 115V/60Hz

X=4 for 100V/60Hz

*external floor water tank 5L for models 100 to 500
external floor water tank 10L for models 700 to 900
+ water tubing and 1 deionisation cartridge included*

OPTIONS and ACCESSORIES :

6710 01 210	Table water tank 5L (7x33x33) in stead of the external floor water tank
6710 01 100	Additional 5L floor water tank (14x18x40)
6711 01 102	Additional 10 L floor water tank (18x22x47)
6710 01 105	Additional 5L water tank, fully equipped, 1.5m tubes
6711 01 107	Additional 10L water tank, fully equipped, 1.5m tubes

SPARE PARTS and CONSUMABLES for maintenance :

6711 01 110	Deionisation cartridge (1 pce) for H2
6711 01 120	H2 Set of filters (for Air, Hydrogen and water line)
6711 01 131	New H2 cell (standard exchange)
6711 01 032	New H2 cell
6710 05 110	(Air) Set of filters (coalescent / dust filter)
6710 05 210	(Air) Replacement catalysis oven (new)



Netel (India) Limited Head office S.V. Road, Manpada, Thane (W) 400607. T (022) 32560285 / 25890110 / 25890111
F (022) 25890976 www.netel-india.com E sales@netel-india.com, vms@netel-india.com Factory W408, MIDC, Rabale, TTC
Industrial Area, Navi Mumbai 400701. T (022) 27607102 F (022) 27607101 Regional Sales & Service Offices - Chennai T (044)
24343591 / 32927521, F (044) 24343960 E chennai@netel-india.com Kolkata T (033) 22471911 / 22472510 F (033) 22876446
E kolkata@netel-india.com New Delhi E delhi@netel-india.com Baroda T/F (0265) 2311181 E baroda@netel-india.com
Surat (0261) 22840593 F 22840121 Hyderabad E netelhyd@netel-india.com