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GENERAL PRODUCT INFORMATION

OPERATING PRINCIPLES

HK Plus Hydrogen Generator
PG Plus Hydrogen Generator
PG Plus FID Tower Hydrogen (+ Zero Air Generator)
PG Plus FID Station Hydrogen (+ Zero Air Generator)
NM Plus Hydrogen Generator
NM Plus FID Tower Hydrogen (+ Zero Air Generator)
NM Plus FID Station Hydrogen (+ Zero Air Generator)

1. Hydrogen is produced by electrolysis of deionized water across a PEM (Proton Exchange Membrane) incorporated in a 100% titanium electrolytic cell.
2. The resultant hydrogen is purified using a combination of gas liquid separation and a unique Nafion drying membrane. This produces 99.9996% purity gas ideal for all GC detector applications.
3. For the higher purity NM Plus versions, a third stage patented automatic cold dual dynamic dryer increases the purity to 99.99996%, ideal for all GC and GC/MS carrier gas applications.
4. For generators incorporating Zero Air, a separate supply of compressed air is purified using a combination of filtration and a heated catalyst to remove hydrocarbons to <0.1ppm.

Whisper (+ Hybrid)

1. A standard supply of compressed air is filtered by high efficiency coalescing filters to remove all contaminants down to 0.1 micron. A unique proprietary hollow fibre membrane then separates the air into a concentrated nitrogen stream.
2. Nitrogen diffuses through the membrane slower than O2, CO2, CO, etc. leaving a supply of high purity, clean and dry gas.

Mistral Evolution Gas Station Nitrogen Generator (+P-E)
Mistral Evolution Hybrid Nitrogen Generator

1. Nitrogen is produced by utilizing a combination of compressor, filtration and CMS (Carbon Molecular Sieve) technology.
2. High and low pressure compressors are carefully matched to the CMS demand to ensure quiet and reliable operation.

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3. Nitrogen is produced at low pressure, which ensures a longer compressor life, and then compressed to 8 bar using a second stage compressor. This combination guarantees a long compressor life reducing maintenance costs and down time.
4. For the specialist hybrid version, air is produced using an additional third stage compressor maintaining a separate constant flow and pressure.

HP Plus Tower Nitrogen (+HC Removal Generator)

1. An external supply of compressed air is purified using a combination of filtration and CMS (Carbon Molecular Sieve) technology.
2. Using a specialized process, the CMS is filled into twin tower PSA (Pressure Swing Adsorption) system.
3. The continuous adsorption and de-adsorption produces a supply of ultra-high purity nitrogen.
4. For GC applications, the optional catalyst removes hydrocarbons to <0.1ppm/

GC Plus Zero Air Generator

1. An external supply of compressed air is purified using a combination of filtration and catalytic oxidation technology.
2. The first stage of filtration removes water, oil, and particulate to <0.1ppm.
3. The air then passes across a heated platinum catalyst which removes the hydrocarbons to <0.1ppm.
4. A final high-efficiency filter ensures an ultra-high purity, hydrocarbon and particulate free air supply.

GT Plus Ultra Zero Air Generator

1. An external supply of compressed air is purified using a combination of filtration and catalytic oxidation technology.
2. The first stage of filtration removes water, oil, and particulate to <0.1ppm.
3. A no maintenance PSA (Pressure Swing Adsorption) system filled with a molecular sieve removes CO2, CO, and water vapor.
4. Specialist carbon filters the NOx and SOx.
5. The air then passes across a heated platinum catalyst which removes the hydrocarbons to <0.1ppm.
6. A final high-efficiency filter ensures an ultra-high purity, hydrocarbon and particulate free air supply.