

Air, Hydrogen & Nitrogen

The HANG generator is a unique multiple generation system exclusive of Claind, which includes hydrogen, nitrogen and pure air supply all in one.

The generators are all autonomous and are equipped with microprocessor control system for monitoring the working status and alarm signalling.

The HC feature is available on the nitrogen side and the three generators are completely independent one from the other.

One of the main advantages of this system is the low space occupancy. In fact one hydrogen generator from the HG 2000 series (desk version) is mounted on top of the ANG generator to build up the HANG generator.

Main Features

- Built in compressor for air and nitrogen
- Fast start feature to allow the maximum purity just few minutes after switching on
- Stand by mode allows to produce the only gas quantity required
- Compact instrument
- **Catalytic reactor for hydrocarbon removal**

Hydrogen Safety Alarms

Hydrogen leaks internal and external to the generator (tailored for GC carrier gas)

Hydrogen overpressure

Low level water



Working Principle

NITROGEN & PURE AIR

Both air and nitrogen are produced according to the **PSA principle (Pressure Swing Adsorption)**.

Ambient air is purified from oxygen, moisture, CO₂ and other 'contaminants' by passing through a Carbon Molecular Sieve filter (CMS).

By using different composition of CMS and by setting different operating parameters, purified air is obtained from one side and high pure nitrogen from the other side.

HC removal is done with a catalytic reactor (only nitrogen side).

HYDROGEN

Hydrogen is produced through a patented electrolytic cell, manufactured exclusively from Claind. Demineralized water is loaded into the electrolytic from a small water tank. The patented cell electrolysis the water producing hydrogen. Oxygen is then safely dissipated into the atmosphere. Hydrogen flows through a stainless steel desiccant cartridge for moisture removal.

Models & Technical Specifications

MODEL*	H ₂ FLOW Nml/min	N ₂ FLOW Nml/min	Air FLOW Nml/min	POWER RATING VA	Weight kg
HANG 2201	200	800	3000	700	92
HANG 2201 HC	200	800	3000	800	97
HANG 2401	400	800	3000	770	94
HANG 2401 HC	400	800	3000	870	99
HANG 2601	600	800	3000	840	96
HANG 2601 HC	600	800	3000	940	101

Electrical supply: 230 Vac 50 Hz or 110 Vac 60Hz

Noise level: < 55 dB

Operating temperature: between 5°C and 40°C

Consumables: refer to the specific gas data sheet

Gas Characteristic

H₂ outlet pressure: 0-6 barg*

N₂ outlet pressure: 4 barg

* Standard setting 4 barg, adjustable by the operator. 6 barg available on demand

	HANG 2xxx	HANG 2xxx HC
Hydrogen purity*	99,99999%	99,99999%
Nitrogen purity	99,9995%	99,9995%
Moisture content AIR side	< -60 °C dew point	< -60 °C dew point
Total hydrocarbons residual**	...	< 0,1 ppm

* When used with additional purifier

** tested in Claind laboratories in standard conditions @ 25°C

Dimensions

	HANG 2xxx
Height	118 cm
Width	40 cm
Depth	58 cm

HC feature (hydrocarbons removal)

HC removal efficiency:
 > 99% methane (CH₄);
 > 99,5% aromatics (BTX) and hydrocarbons starting from C₃H_n ;
 > 99,9% carbon dioxide (CO₂), hydrogen (H₂) ethylene and propylene.