



**VICI DBS™**

**ANALYTICAL GAS GENERATORS**

INNOVATIVE GAS SOLUTIONS FOR YOUR LAB

## DBS Instrumenti joins the VICI group of companies, becoming VICI DBS.

With the acquisition of DBS Strumenti Scientifici SpA in January 2016 the VICI group of companies broadens its array of products for the analytical industry. This includes temperature control accessories for chemical analysis and a range of hydrogen, nitrogen and zero air generators for analytical instruments such as GC, GC/MS and LC/MS. The modern facilities cover a total of 1,500 M<sup>2</sup> (16,000 sq. ft) manufacturing in accordance with the UNI EN ISO 9001:2008 quality systems.



VICI AG International  
Schenkon, Switzerland

Since 1968, VICI Valco Instruments Co. Inc. USA has been the leading designer and manufacturer of standard and custom components for precision analytical, biomedical, and biocompatible instrumentation.

In 1981, VICI expanded into Europe with the founding of VICI AG International in Switzerland. Our product portfolio includes valves and fittings, pneumatic and electric actuators, metal or polymer tubing and sampling loops, heated enclosures, valve sequence and temperature controllers, flow controllers, pumps and GC detectors.



VICI DBS  
Padova, Italy

VICI DBS is a world-renowned manufacturer of high quality gas generators for analytical applications. Our innovative products bring significant, solution based benefits to all scientific users across all market sectors. Our product development approach is intelligent and customer focused, led by real user needs and benefits.

VICI DBS products are designed and manufactured at the VICI facility in Padova, Italy with administration support for customers in Europe, Asia, and Africa directed from VICI AG International in Schenkon, Switzerland.



VICI DBS USA  
Houston, Texas

In 2017, VICI DBS USA opened in Houston, Texas to serve the US, Canada, Central America, and South America.



## PG Plus Series

### Ideal for all GC detector applications

VICI DBS Hydrogen Generators offer a safe, economical and convenient alternative to gas cylinders. The PG Plus Series provides superior performance with proprietary electrolytic cell technology combined with high quality components and a unique hydrogen drying solution. Ideal for use with gas chromatography detectors such as FID, NPD, and FPD.

#### **Cascading – the ability to install several hydrogen generators in parallel**

- Higher flow rates up to 10 lpm
- Automatic flow compensation in the event of unplanned down-time
- Continuous operation for critical applications

**Never run out of high purity hydrogen again!**

#### **PG PLUS SERIES FEATURES:**

- Flow rate from 100 to 600 ml/min
- Purity 99.9996%
- Pressure up to 11 bar (160 psig)
- Minimal maintenance
- Unique drying membrane - no desiccant cartridges required
- Unique 100% titanium electrolytic cell
- 2 year standard warranty



## NM Plus Series

**Ideal for all GC & GC/MS carrier gas and detector gas applications**

The NM Plus Series enhances the high performance of the PG Plus with the addition of a unique no maintenance purification system. This results in ultra high purity carrier grade gas. With its highly sophisticated software control and safety alarm capability it presents the GC user with the opportunity to reap the benefits of hydrogen carrier gas while overcoming the safety concerns.

### **NM PLUS SERIES FEATURES:**

- Flow rate from 100 to 1000 ml/min
- Purity 99.99996%
- Pressure up to 11 bar (160 psig)
- No maintenance
- USB for remote monitoring and servicing
- Unique 100% titanium electrolytic cell
- 2 year standard warranty



FID Flat Version for placement under GC



FID Tower Version

## FID Gas Station

### Ideal for all GC Detectors and Carrier Gas Applications

This clever instrument combines the reliability of our hydrogen and zero air generators into one compact and convenient package. Available in both high purity PG Plus and Ultra high purity NM plus configurations, the FID station can be ordered in either of two different styles – flat for placement under a GC, or the FID tower to conserve bench space. Available in a variety of H<sub>2</sub> flow ranges up to 1 L/min and zero air flow rates up to 5 lpm.

#### FID GAS STATION FEATURES:

- H<sub>2</sub> flow rate from 100 to 1000 ml/min
- H<sub>2</sub> purity options 99.9996% or 99.99996%
- H<sub>2</sub> pressure up to 11 bar (160 psig)
- Zero air flow rates 1.8 or 5 lpm
- Zero air purity <0.1 ppm
- Minimal maintenance
- H<sub>2</sub> and zero air in a single solution



## Nitrogen Generators

### For Gas Chromatography and Analytical Instrument Applications

VICI DBS nitrogen generators are engineered to transform standard compressed air into a safe regulated supply of Ultra High Purity nitrogen. Utilizing a superior quality carbon molecular sieve (CMS) and innovative column switching, the nitrogen generators require minimal maintenance and operator attention.

#### **NITROGEN GENERATOR FEATURES:**

- Flow rates from 500 to 4,000 ml/min
- Purity up to 99.999%
- Pressure up to 5 bar (75psig)
- Space saving design
- Optional hydrocarbon removal for GC applications
- Ideal for GC carrier gas including ECD, make up gas, TOC, DSC, and ELSD applications



Mistral Evolution



Whisper

## Mistral Evolution and Whisper Series

### For LC/MS/MS and ELSD Applications

The Mistral Evolution and Whisper nitrogen generators have been specifically designed to meet the flow, pressure and purity requirements of all the leading LC/MS instrument manufactures. Nitrogen is produced by either carbon molecular sieve (CMS) or hollow fiber membrane technology, depending on the exact user requirements. Generators are also available with integral compressors, providing a complete "plug and play" solution.

#### **MISTRAL EVOLUTION AND WHISPER SERIES FEATURES:**

- Flow rates from 10 to 120 lpm
- LC/MS grade hydrocarbon free nitrogen
- Pressure up to 8 bar (116 psig)
- Oil free, low noise compressor options
- Specialist hybrid air and nitrogen options for Agilent Microwave Plasma and Sciex LC/MS/MS



## GC and GT Ultra-Zero Air Generator

For GC-FID, TOC, CEM and Process Control Applications

VICI DBS GC and GT Zero Air Generators are designed to supply ultrapure hydrocarbon free zero air for GC-FID applications. Catalytic oxidation technology eliminates hydrocarbons to <0.1ppm resulting in a flat and stable baseline, increased sensitivity and repeatable analysis.

For more demanding applications such as TOC, Continuous Emissions Monitoring and process control applications the GT Zero Air Generator removes CO, CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub> and water vapor.

### GC & GT ULTRA-ZERO AIR FEATURES:

- Flow rates from 1 to 30 lpm
- Pressure up to 6.5 barg (95 psig)
- GC zero air purity <0.1ppm
- GT zero air purity <0.1ppm HC, <5 ppm CO<sub>2</sub>, <0.1 ppm CO, <0.1ppm NO<sub>x</sub> and SO<sub>x</sub>
- Minimal maintenance
- Also available in a 19" rack option