



FOCUSED ON CHROMATOGRAPHY

AGS-Chromatography-E



ENGINEERING **YOUR** SUCCESS.

FOCUSED ON PURITY

Offering a wide range of advantages over traditional cylinder gas supply, gas generators are increasingly becoming the popular choice in many laboratories.

In chemical sectors such as pharmaceuticals, polymer, environmental monitoring, CRO, and forensics, scientists rely upon specialized instruments for fast and accurate analysis of compound properties.

A consistent, safe supply of high-purity make-up, carrier, and fuel gases is essential to ensure precise results in separation techniques such as gas chromatography.

The challenge is to find a gas supply solution that meets the quality criteria while being easy to use, cost-efficient, and reliable.



Parker on-site gas generation allows us to have a high-purity, safe, and consistent supply of gas.



Consistent, reliable purity

Gas purity varies significantly from cylinder to cylinder, and impurities can be introduced via the pipeline during changeover. In contrast, on-site generators consistently supply high-purity gas, preventing variations in quality, and ensuring ultra-sensitive analysis, every time.

Supported by proven, advanced technologies you can trust, Parker gas generators to deliver the reliability and consistency your work demands.

Expert gas generation solutions

With a history of expertise in gas generation, Parker is perfectly placed to support profitable operations in analytical science. Working with partners in laboratories across a range of sectors, our industry-leading solutions enable consistent accuracy through a constant, on-demand supply of nitrogen, hydrogen, and zero air for carrier, make-up, and fuel gas.

FOCUSED ON PERFORMANCE

A safer choice

High-pressure cylinders are inherently linked to safety issues – from the chance of injury through manual handling to the risk of gas leaks, which can make the atmosphere potentially explosive or deficient in oxygen.

Gas generators from Parker are a safe alternative, thanks to leak detection technology with 'auto shut off' and integral alarms. They also operate at a fraction of the pressure and with low volumes of stored gas, further reducing the potential for harm.

These generators eliminate many of the inconveniences of dependence on outside vendors, such as uncontrollable price increases, dewar ice and condensation, contract negotiations, long term commitments, and tank rentals. With a Parker generator, you control your gas supply.

Cost-efficient with the lowest lifetime cost

In some cases, you can expect to have recouped the cost of your gas generator in less than one year. Energy efficient technologies keep running costs down, there are no hidden charges such as on-going delivery costs, cylinder rental or storage fees for spares and empty cylinders, and maintenance and part replacement costs are minimal.





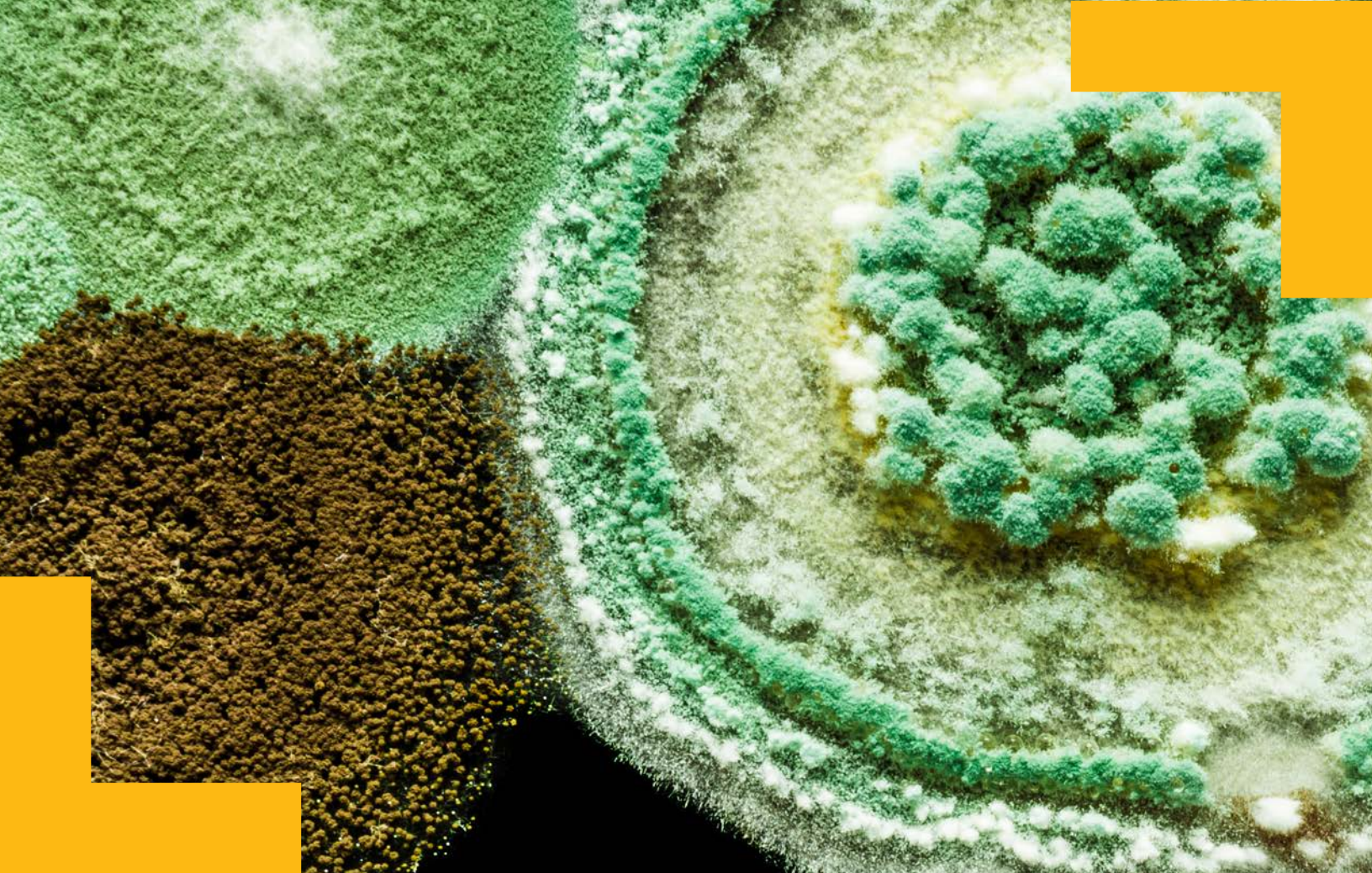
Global support for your peace of mind

We know that business continuity is vital to your work. That's why we offer a comprehensive package of expert service, care, and maintenance across our complete analytical gas systems range, worldwide.

From installation, scheduled maintenance, and in very rare cases, emergency assistance, wherever you are, you can trust Parker to give you complete peace of mind.

Continuous supply, available on-demand

Parker gas generators are engineered to transform standard compressed air into high quality analytical gas at safe, regulated pressures, on demand, without operator attention. Engineered for easy installation, operation, and long term performance, and permanently installed at the point of use, an on-site generator provides you with straightforward access to an unlimited supply of gas. Always at the correct pressure, flow, and temperature, Parker gas generators improve the stability of your instruments and the accuracy of your results.



FID Gas Stations

Parker FID Gas Stations provide both hydrogen gas and zero grade air to FID detectors on gas chromatographs. These systems are specifically designed to provide fuel gas and support air to 5-6 flame ionization detectors, flame photometric detectors, or total hydrocarbon analyzers.

Hydrogen gas is produced from deionized water using a proton exchange membrane cell. The hydrogen generator compartment utilizes the principle of electrolytic dissociation of water and hydrogen proton conduction through the membrane. The hydrogen supply produces up to 250 cc/min of 99.9995% pure hydrogen with pressures to 60 psig.

Zero air is produced by purifying on-site compressed air to a total hydrocarbon concentration of < 0.1 ppm (measured as methane). The zero air compartment produces up to 2500 cc/min of zero grade air.

FID Gas Station

- Ideal for up to 5-6 FIDs
- Increases the accuracy of analysis
- Reduces the cleaning requirement for the detector
- Recommended and used by many GC and column manufacturers
- Typical payback period of less than one year
- Automatic water fill
- Silent operation
- Minimal operator attention required
- Exceed NFPA 504 and OSHA 1910.103 regulations
- Meet toughest laboratory standards in the world: CSA, UL, and IEC1010



Principal Specifications

Model	FID-1000NA	FID-2500NA
Hydrogen Purity	99.9995%	99.9995%
Zero Air Purity	< 0.1 ppm (total hydrocarbon as methane)	< 0.1 ppm (total hydrocarbon as methane)
Maximum Hydrogen Flow Rate	90 cc/min	250 cc/min
Maximum Zero Air Flow Rate	1000 cc/min	2500 cc/min
Electrical Requirements	120/230VAC, 60/50Hz, 4 Amps	120/230VAC, 60/50Hz, 4 Amps
Hydrogen Outlet Pressure	60 psig	60 psig
Zero Air Outlet Pressure	40-125 psig	40-125 psig
Certifications	IEC 1010-1; CSA 1010; UL 3101; CE Mark	IEC 1010-1; CSA 1010; UL 3101; CE Mark
Dimensions	10.5" w x 17" d x 16.5" h, (27cm x 43cm x 42cm)	
Inlet Port	1/4" NPTF compressed air supply	1/4" NPTF compressed air supply
Outlet Ports	1/8" compression	1/8" compression
Shipping Weight	53 lbs / 24 kg	53 lbs / 24 kg

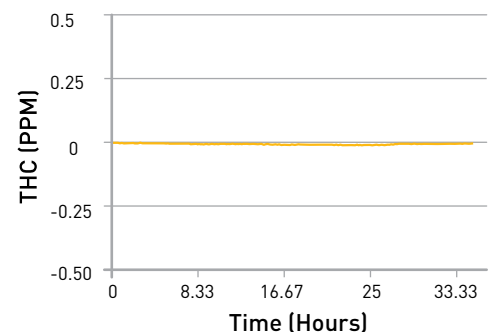
Ordering Information

for assistance, call 800-343-4048

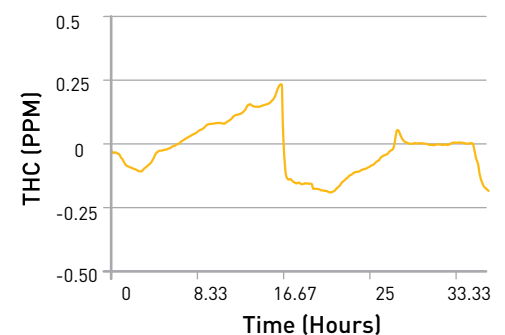
Description	Model
FID Gas Station	FID-1000NA, FID-2500NA
Installation Service	FID-1000-INST, FID-2500-INST
Annual Maintenance Kit	MKFID1000
Preventive Maintenance Plan	FID-1000-PM, FID-2500-PM
Extended Support (24 Month Warranty)	FID-1000-DN2, FID-2500-DN2

The chromatograms below compare baselines produced by a Parker FID gas station and bottled fuel air. The baseline produced by the Parker generator is very flat, with no fluctuations or peaks, in comparison with the chromatogram of the bottled air fuel supply, which has many peaks ranging from .25 ppm to -.25 ppm.

Baseline FID-2500 Gas Station



Baseline Bottled Fuel Air



Recommended Gas Generators for Analytical Instruments

Instrument	Gas Requirements	Gas Purity Requirements	Flow Rates	Generator Recommendation/Model
Atomic Absorption (AA) with Flame	Air for Oxidant Gas	Clean, dry	1-7 SCFM	AA Gas Purifier Model 73-100
Atomic Thermal Desorber	Zero Air Hydrogen for FID Fuel	Clean, dry, hydrocarbon-free Clean, dry, high purity	Up to 1600 ml/min.	Zero Air or TOC Gas Generator HPZA-3500 or TOC-1250
Atmospheric Pressure Ionization (API-MS)	Air for nebulizer gas, nitrogen for curtain, sheath, and shield gas	Clean, dry, hydrocarbon-free 99% or higher (Nitrogen or Zero Air)	20-67 lpm	Nitrogen Generator N2-14, N2-22, N2-35, N2-45, N2-80, N2-135, N2-200, Nitroflowlab, Nitroflow60, NitroflowTG1, NitroflowTG2, 76-98-N100, 76-98-N200, 76080
Autosamplers for Various Instruments	Air for pneumatic controls, nitrogen for sample injector	Clean, dry Ultra high purity	<1 SCFM <550 cc/min	Membrane Air Dryer 64-02 UHP Nitrogen Generator UHPN2-1100
CO ₂ Analyzers	Calibration Air	CO ₂ free	0.5-1.0 SLPM	FT-IR Purge Gas Generator Spectra15, Spectra30
Continuous Emissions Monitoring (CEM)	Calibration Air Dilution Air	Dry, CO ₂ , SO ₂ , NO _x , Hydrocarbon-free	10-15 SLPM	CEM Zero Air Generator 75-45-M744
Emissions Analyzers	Zero Air	Hydrocarbon-free	2-15 SLPM	Zero Air Generator HPZA-18000
Fourier Transform Infrared Spectrometer (FT-IR)	Air for sample compartment, optics, and/or air-bearing	Clean, dry, CO ₂ -free	0.5-3 SCFM	FT-IR Purge Gas Generator Spectra 15, Spectra 30 Lab Gas Generator 74-5041NA
Gas Chromatograph (GC) GC-FID	Zero air as flame support air Hydrogen as flame fuel gas Hydrogen as capillary carrier gas Nitrogen as packed carrier gas Nitrogen as make up gas	Clean, hydrocarbon-free Ultra high purity Ultra high purity Ultra high purity, zero grade Ultra high purity, zero grade	150-600 cc/min. 30-40 cc/min. Varies Varies <100 cc/min	Zero Air Generator HPZA-3500 Hydrogen Generator H2PEM-260 Hydrogen Generator H2PD-300 UHP Nitrogen Generator UHPN2-1100 UHP Nitrogen Generator UHPN2-1100
GC-FPD	Zero Air as Flame Support Air Hydrogen as Flame Fuel Gas Hydrogen as Capillary Carrier Gas Nitrogen as Packed Carrier Gas	Clean, hydrocarbon-free Ultra high purity Ultra high purity Ultra high purity	<200 cc/min 50-70 cc/min Varies Varies	Zero Air Generator HPZA-3500 Hydrogen Generator H2PEM-260 Hydrogen Generator H2-1200 UHP Nitrogen Generator UHPN2-1100
GC-NPD	Zero Air to Rubidium/Thermonic Bead Hydrogen as Detector Support Gas Hydrogen as Capillary Carrier Gas Nitrogen as Packed Carrier Gas	Dry, clean, hydrocarbon-free Ultra high purity Ultra high purity Ultra high purity	<200 cc/min <10 cc/min Varies Varies	Zero Air Generator HPZA-3500 Hydrogen Generator H2PEM-100 Hydrogen Generator (Palladium) H2PD-300 UHP Nitrogen Generator UHPN2-1100
GC-ECD	Nitrogen as carrier gas Nitrogen as make up gas	Ultra high purity, zero grade Ultra high purity, zero grade	Varies <100 cc/min	UHP Nitrogen Generator UHPN2-1100 UHP Nitrogen Generator UHPN2-1100
GC-ELCD, HALL	Hydrogen as reaction gas	Ultra high purity	70-200 cc/min	Hydrogen Generator H2PD-300

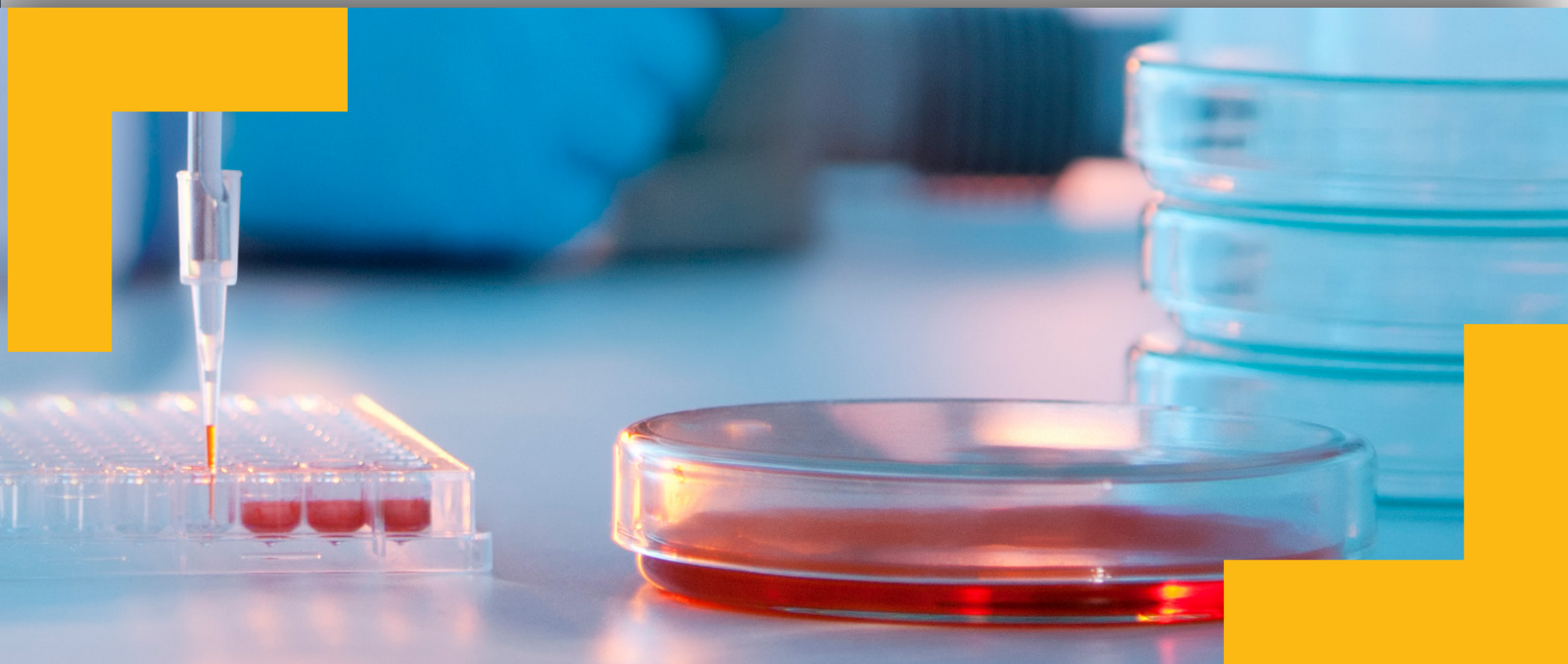
Instrument	Gas Requirements	Gas Purity Requirements	Flow Rates	Generator Recommendation/Model
GC- TCD	Hydrogen as carrier & reference gas	Ultra high purity	Varies	Hydrogen generator H2PD-300
LC-MS	Nitrogen as a curtain gas	LC-MS Grade	3-30 lmp	Nitrogen generator N2-14, NitroFlowLab, NitroFlow60, N2-35
ICP Spectrometer	Nitrogen as Optic/Camera Purge	Ultra high Purity	<1-5 lmp	Nitrogen generator 76-98NA
Nuclear Magnetic Resonance (NMR)	Air for lifting, spinning	Clean, dry	<10 SCFM	Air dryer UDA-300NA Lab gas generator 74-5041NA
Ozone generator	Supply air	Clean, dry	.3-20 SCFM	Air dryer 64-01, 64-02, 64-10, UDA-300NA
Protein analyzer	Dry air, nitrogen	Clean, dry	Up to 5 SCFM	Nitrogen generator N2-14, N2-22, NitroFlowLab, N2-35
Solvent evaporators (sample concentrators)	Nitrogen	Clean, dry nitrogen	2-15 SLPM	Zero Air Generator Nitrovap-1LV, Nitrovap-2LV
Stack gas sampler	Dilution air	Clean, dry	<1.0 SCFM	CEM zero air generator (75-45-M744)
Total oxygen demand (TOD)	Nitrogen as a carrier gas	Ultra high purity	300 cc/min	Nitrogen Generator UHPN2-1100
Thermal gravimetric analyzer (TGA)	Nitrogen as furnace purge	Clean, dry, inert	<100 cc/min	Zero Air Generator HPZA-3500 Hydrogen Generator H2PEM-260 Hydrogen Generator H2PEMPD-1300-100 UHP Nitrogen Generator UHPN2-1100
Differential scanning calorimeter (DSC)	Air for air shield	Clean, dry	<100 cc/min	Dry Air Generator 64-01, UDA-300
Total hydration analyzer (THA)	Zero Air for FID Hydrogen as flame fuel gas	Clear, hydrocarbon free Ultra high purity	50-500 cc/min 5-50 cc/min	Zero Air Generator 75-82S, 75-83NA Hydrogen Generator H2PEM-100
Total organic carbon analyzer (TOC)	Dry air or nitrogen for carrier gas Combustion gas	Clean, dry, hydrocarbon-free, CO ₂ Free, Ultra high purity	100-500 SLPM 50-700 cc/min	TOC gas generator TOC-625, TOC-1250 UHP Nitrogen Generator UHPN2-1100

Legal Notifications



WARNING

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www.parker.com/igfg

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