



FOCUSED ON ULTRA DRY AIR

Bulletin AGS-UDA-C



ENGINEERING **YOUR** SUCCESS.

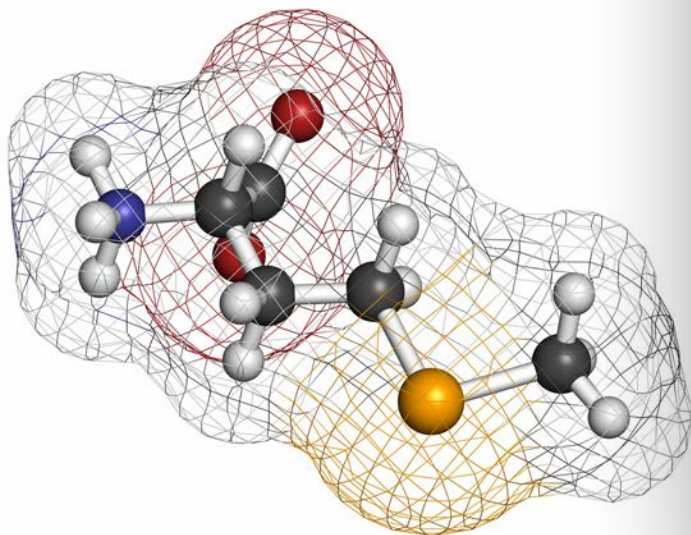
FOCUSED ON PURITY

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 gases is essential to ensure precise results in analytical techniques such as chromatography, spectroscopy, and spectrometry.

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 supply consistently 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 positioned 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 various analytical gases.

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.

Ultra Dry Air Gas Generator

Model UDA-300

Model UDA-300 Compressed Air Dryer provides ultra-dry, purified compressed air to analytical instruments. The generator reduces the dewpoint to -100°F (-73°C) without operator attention.

- Supplies ultra-dry, purified compressed air to NMR Spectrometers and other analytical instruments
- Ideal gas supply for spindle and automatic sample changer
- Compact design frees up valuable floor space
- Completely automatic - plug it in and forget about it
- Simple installation & operation



Each system is delivered complete and ready for easy installation. A high efficiency prefiltration system, automatic drains, a 0.01µm final filter, a moisture indicator, and pretested controls are integral to the design of each dryer.

Designed specifically for NMR instrumentation, the generator is completely automatic and virtually maintenance free. It is ideal for injecting, spinning, and lifting operations. It is recommended by major NMR instrument manufacturers and is currently installed in several thousand locations.

Principal Specifications

Model UDA-300	
Min/Max Inlet Air Pressure	60 psig/125 psig
Flow Rate at 60 psig	390 scfh (184 lpm)
Flow Rate at 125 psig	720 scfh (340 lpm)
Dew Point	-100°F (-73°C)
Max Inlet Air Temperature ¹	78°F (25°C)
Inlet/Outlet Port Size	1/4" NPT (female)
Electrical Requirements	120 VAC/60 Hz, 10 Watts
Dimensions	41"h x 15"w x 8"d (104cm x 38cm x 20cm)
Shipping Weight	50 lbs (23 kg)

NOTES

1. Outlet dew point will increase at higher inlet compressed air temperatures

Ordering Information

for assistance, call 800-343-4048

Description	Model Number
Compressed Air Dryer	UDA-300
Inlet Pressure Regulator	72-130-V883
Annual Maintenance Kit	MK7525
Preventive Maintenance Plan	UDA-300-PM
Extended Support with 24 Month Warranty	UDA-300-DN2



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, Spectra 30
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

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE. This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met. The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

Parker Also Offers Gas Generators for these Applications

Products for LC-MS & Evaporation

- High purity nitrogen for LCMS instruments and solvent evaporation
- Tri-gas units available for instruments that require nitrogen, dry air, and zero grade air
- Produce a continuous supply of high purity nitrogen from an existing compressed air supply
- Integrated compressor systems eliminate the need for house air
- Systems available to support one or dozens of instruments

Products for Spectroscopy

- Remove water and CO₂ from compressed air
- Protect expensive optics from damage from water vapor
- Increase Signal to Noise Ratio and maximize instrument sensitivity
- Ultra dry air for NMR injecting, spinning, and ejecting samples

Products for Chromatography

- Hydrogen, Zero Air, and UHP Nitrogen Generators for gas chromatography
- Combination systems available to provide multiple gasses from one unit
- Highest purities available from any supplier

Analytical Gas Supplies

- Installation kits, compressors, purifiers, flow-meters, regulators, and all the materials needed to equip your lab
- High quality components, designed specifically for use with Parker gas generators, to deliver high purity gas to your instruments

Products for TOC Analysis

- Generate gasses for all combustion, UV persulfate, and wet oxidation techniques
- Ensures consistent, reliable, instrument operation and reduces instrument service and maintenance costs





Worldwide Filtration Manufacturing Locations

North America

Compressed Air Treatment

Industrial Gas Filtration and Generation Division

Lancaster, NY
716 686 6400
www.parker.com/igfg

Haverhill, MA
978 858 0505
www.parker.com/igfg

Engine Filtration

Racor

Modesto, CA
209 521 7860
www.parker.com/racor

Holly Springs, MS
662 252 2656
www.parker.com/racor

Hydraulic Filtration

Hydraulic & Fuel Filtration

Metamora, OH
419 644 4311
www.parker.com/hydraulicfilter

Laval, QC Canada
450 629 9594
www.parkerfarr.com

Velcon
Colorado Springs, CO
719 531 5855
www.velcon.com

Process Filtration

domnick hunter Process Filtration SciLog

Oxnard, CA
805 604 3400
www.parker.com/processfiltration

Water Purification

Village Marine, Sea Recovery, Horizon Reverse Osmosis

Carson, CA
310 637 3400
www.parker.com/watermakers

Europe

Compressed Air Treatment

domnick hunter Filtration & Separation

Gateshead, England
+44 (0) 191 402 9000
www.parker.com/dhfn

Parker Gas Separations

Etten-Leur, Netherlands
+31 76 508 5300
www.parker.com/dhfn

Hiross Zander

Essen, Germany
+49 2054 9340
www.parker.com/hzfd

Padova, Italy
+39 049 9712 111
www.parker.com/hzfd

Engine Filtration & Water Purification

Racor

Dewsbury, England
+44 (0) 1924 487 000
www.parker.com/rfde

Racor Research & Development

Stuttgart, Germany
+49 (0)711 7071 290-10

Hydraulic Filtration

Hydraulic Filter

Arnhem, Holland
+31 26 3760376
www.parker.com/hfde

Urdala, Finland
+358 20 753 2500

Condition Monitoring Parker Kittiwake

West Sussex, England
+44 (0) 1903 731 470
www.kittiwake.com

Process Filtration

domnick hunter Process Filtration Parker Twin Filter BV

Birtley, England
+44 (0) 191 410 5121
www.parker.com/processfiltration

Asia Pacific

Australia

Castle Hill, Australia
+61 2 9634 7777
www.parker.com/australia

China

Shanghai, China
+86 21 5031 2525
www.parker.com/china

India

Chennai, India
+91 22 4391 0700
www.parker.com/india

Parker Fowler

Bangalore, India
+91 80 2783 6794
www.johnfowlerindia.com

Japan

Tokyo, Japan
+81 45 870 1522
www.parker.com/japan

Korea

Hwaseon-City
+82 31 359 0852
www.parker.com/korea

Singapore

Jurong Town, Singapore
+65 6887 6300
www.parker.com/singapore

Thailand

Bangkok, Thailand
+66 2186 7000
www.parker.com/thailand

Latin America

Parker Comercio Ltda.

Filtration Division
Sao Paulo, Brazil
+55 12 4009 3500
www.parker.com/br

Pan American Division

Miami, FL
305 470 8800
www.parker.com/panam

Africa

Aeroporto Kempton Park, South Africa
+27 11 9610700
www.parker.com/africa



Parker Hannifin Corporation
Industrial Gas Filtration
and Generation Division
4087 Walden Avenue
Lancaster, NY 14086
phone 800 343 4048
www.parker.com/igfg

