

# FT-IR Purge Gas Generators

- Eliminates the need for costly, dangerous, inconvenient nitrogen cylinders in the laboratory
- Compact design frees up valuable laboratory floor space
- Improves signal-to-noise ratio even on non-purge systems
- Increases FT-IR sample thru-put and maximizes up-time
- Recommended and used by all major FT-IR manufacturers



Model 75-52NA, 75-62NA, and 75-45NA

**The Parker Balston® FT-IR Purge Gas Generator** is specifically designed for use with FT-IR Spectrometers to provide a purified purge and air bearing gas from compressed air. The generator supplies carbon dioxide-free air at less than -100°F (-73°C) dew point with no suspended impurities larger than 0.01 µm. The unit is designed to operate continuously 24 hours/day, 7 days/week. The Parker Balston Purge Gas Generator completely eliminates the inconvenience and the high costs of nitrogen cylinders and dewars, and significantly reduces the costs of operating FT-IR instrumentation. The Parker Balston unit offers cleaner back-

ground spectra in a shorter period of time and more accurate analysis by improving the signal-to-noise ratio. The typical payback period is less than one year. The generator is also ideally suited for use with CO<sub>2</sub> Analyzers and Matrix GC's in addition to supplying gas to other laboratory instruments.

The generators are quiet, reliable, and easy to install - simply attach the inlet and outlet air lines (at least 60 psig and 1/4 inch pipe), plug the power cord into a wall outlet, and enjoy trouble-free operation.

#### Here's what your colleagues say:

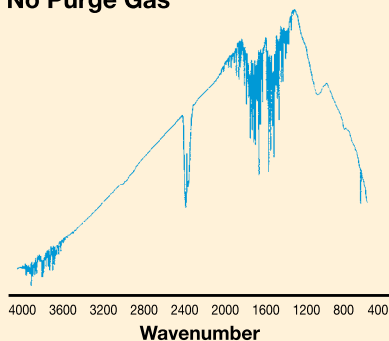
"A Parker Balston® FT-IR Purge Gas Generator and Self Contained Lab Gas Generator were used in conjunction with the Society for Applied Spectroscopy Fourier Transform Infrared Spectrometry Workshop at the University of Georgia, June 2000 (organized by Dr. James A de Haseth and Dr. Peter R. Griffiths). The Self-Contained Lab Gas Generator provided excellent purge for six spectrometers. The organizers were so pleased with the performance of the Parker Balston® systems, they have requested that Parker Hannifin Corporation, Inc. participate in future workshops."

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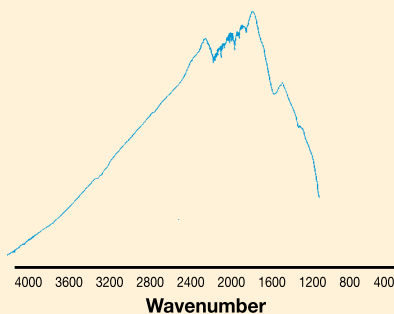
# FT-IR Purge Gas Generators

## Comparative Spectral Analysis in Purging an FT-IR Sample Chamber

### No Purge Gas



### 2 Minutes Parker Balston®



The spectrum collected without purge gas is extremely noisy in several regions. When the sample is purged with nitrogen for two minutes, water vapor and CO<sub>2</sub> are removed and the noise in the spectrum is removed so that important features in the spectrum can be observed.

## Principal Specifications

	Model	
Flow Rate for Specified Dew Point		
Inlet Pressure 125 psig	75-45NA	36 scfh (17 lpm)
Inlet Pressure 60 psig		18 scfh (9 lpm)
Inlet Pressure 125 psig	75-52NA	72 scfh (34 lpm)
Inlet Pressure 60 psig		36 scfh (17 lpm)
Inlet Pressure 125 psig	75-62NA	216 scfh (102 lpm)
Inlet Pressure 60 psig		120 scfh (57 lpm)
CO <sub>2</sub> Concentration		< 1 ppm
Dew Point		-100°F (-73°C)
Min/Max Inlet Air Pressure		60 psig/125 psig
Max Inlet Air Temperature (1)		78°F (25°C)
Air Consumption for regeneration (2)	75-45NA	30 scfh (14 lpm)
	75-52NA	60 scfh (28 lpm)
	75-62NA	120 scfh (57 lpm)
Inlet/Outlet Port Size		1/4" NPT (female)
Electrical Requirements (3)		120 VAC/60 Hz/10 watts
Dimensions	75-45NA	7" w x 13" h x 6" d (18cm x 33cm x 15cm)
	75-52NA	13" w x 28" h x 9" d (32cm x 71cm x 23cm)
	75-62NA	13" w x 42" h x 9" d (32cm x 102cm x 23cm)
Shipping Weight	75-45NA	26 lbs (12 kg)
	75-52NA	60 lbs (27 kg)
	75-62NA	88 lbs (40 kg)

## Ordering Information for assistance, call 800-343-4048, 8 to 5 Eastern Time

Description	Model Number	
FT-IR Purge Gas Generator	75-45NA, 75-52NA, 75-62NA	
Annual Maintenance Kit	75-45NA	MK7505
	75-52NA	MK7552
	75-62NA	MK7520
Installation Kit for All Models	IK7572	
Preventive Maintenance Plan	75-45NA	75-45-PM
	75-52NA	75-52-PM
	75-62NA	75-62-PM
Extended Support with 24 Month Warranty	75-45-DN2, 75-52-DN2, 75-62-DN2	

### Notes

- Outlet dew point will increase at higher inlet compressed air temperatures.
- Total air consumption = regeneration flow + flow demand.
- Refer to voltage appendix for electrical and plug configurations for outside North America.

# Self-Contained FT-IR Purge Gas Generator

- Less expensive and more convenient than nitrogen cylinders and dewars
- Includes state-of-the-art, oil-less compressor
- Compact, portable design is ideal for mobile labs
- Improves signal-to-noise ratio even on non-purge systems
- Increases FT-IR sample thru-put and maximizes up-time
- Special sound insulation design ensures quiet operation

**The Parker Balston® Model 74-5041NA FT-IR Purge Gas Generator** is specifically designed for use with FT-IR spectrometers to provide a purified purge and air bearing gas supply from compressed air. The Parker Balston model 74-5041NA provides instruments with CO<sub>2</sub>-free compressed air at less than -100°F (-73°C) dew point with no suspended impurities larger than 0.01 micron 24 hours/day, 7 days/week. The Parker Balston Self-Contained FT-IR Purge Gas Generator completely eliminates the inconvenience and the high costs of nitrogen cylinders and Dewars, and significantly reduces the costs of operating FT-IR instruments.

The Parker Balston unit generates cleaner background spectra in a shorter period of time and more accurate analysis by improving the signal-to-noise ratio. The typical payback period is less than one year.

The generator is quiet, very reliable, and easy to install - simply attach the outlet air line, plug the electrical cord into a wall outlet, and the unit is ready for trouble-free operation.



Model 74-5041NA

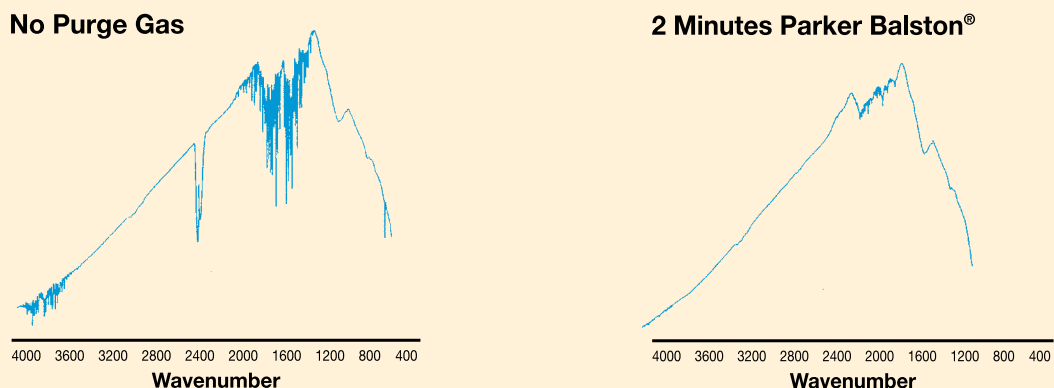
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**- Dr. James A. de Haseth and  
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# Self-Contained FT-IR Purge Gas Generator

## Comparative Spectral Analysis in Purging an FT-IR Sample Chamber



This spectra comparison illustrates that a Parker Balston FT-IR Purge Gas Generator allows an FT-IR to be purged at a much higher flow rate than is practical with nitrogen. The sample chamber purged by the Parker Balston unit is free of CO<sub>2</sub> and water faster than the sample chamber purged by nitrogen.

### Principal Specifications

<b>Self-Contained FT-IR Purge Gas Generator</b>	<b>74-5041NA</b>
Maximum Flow Rate (at 80 psig)	60 SCFH (28 lpm)
Maximum Output Pressure	80 psig
CO <sub>2</sub> Concentration	< 1 ppm
Dew Point	-100°F (-73°C)
Outlet Port Size	1/4" NPT (female)
Min/Max Ambient Temperature	30°F/90°F (-1°C/32°C)
Electrical Requirements (single phase)	120 VAC/60 Hz, 20 amps (1)
Compressor	3/4 hp
Dimensions	18"w x 31"h x 32"d (46 cm x 76 cm x 81 cm)
Shipping Weight	250 lbs. (114 kg)

(1) Refer to voltage appendix for electrical and plug configurations for outside North America.

### Ordering Information for assistance, call 800-343-4048, 8 to 5 Eastern Time

Description	Model Number
FT-IR Purge Gas Generator	74-5041NA
Annual Maintenance Kit	74065
Replacement Compressor	74156
Preventive Maintenance Plan	74-5041-PM
Extended Support with 24 Month Warranty	74-5041-DN2

# Ultra Dry Gas Generator

- Supplies ultra-dry, purified compressed air to NMR Spectrometers and other analytical instruments
- Ideal gas supply for spindle and automatic sample changer
- Completely eliminates costly, inconvenient nitrogen dewars - never pay for or change out another dewar
- Compact design frees up valuable laboratory floor space
- Completely automatic - plug it in and forget about it



Model UDA-300NA

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

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.

To install, simply connect your house compressed air supply (at least 60 psig and 1/4 inch pipe) to the dryer inlet port, and connect the dryer outlet port to your instruments. Plug the electrical cord into a wall outlet - no electrician required - and the unit is ready for trouble-free operation.

Designed specifically for NMR instrumentation, the generator is completely automatic, and virtually maintenance free. It is ideal for injecting, spinning, and lifting opera-

tions. It is recommended by major NMR instrument manufacturers and is currently installed in several thousand locations.

## Principal Specifications

### Model UDA-300NA Compressed Air Dryer

Dew Point	-100°F (-73°C)
Flow Rate at 60 psig	390 scfh (184 lpm)
Flow Rate at 125 psig	720 scfh (340 lpm)
Min/Max Inlet Air Pressure	60 psig/125 psig
Max Inlet Air Temperature (1)	78°F (25°C)
Inlet/Outlet Port Size	1/4" NPT (female)
Electrical Requirements (2)	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)

## Ordering Information for assistance, call 800-343-4048, 8 to 5 Eastern Time

Description	Model Number
Compressed Air Dryer	UDA-300NA
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

Notes:

- 1 Outlet dew point will increase at higher inlet compressed air temperatures
- 2 Refer to voltage appendix for electrical and plug configurations for outside North America.

# ICP Spectrometer Nitrogen Generator

- Produces a continuous supply of ultra high purity nitrogen gas from existing compressed air
- Eliminates the need for costly, dangerous, inconvenient nitrogen cylinders or dewars in the laboratory
- Extends ICP Analysis into far-UV range below 170 (nm)
- Compact design frees up valuable laboratory floor space
- Offers long term cost stability - uncontrollable vendor price increases, contract negotiations, long term commitments and tank rentals are no longer a concern



Model 76-98NA  
Nitrogen Generator

**The Parker Balston® 76-97NA and 76-98NA UHP Nitrogen Generators** can produce 5-12 lpm of ultra high purity nitrogen gas. These systems are completely engineered to transform standard compressed air into 99.9999% of 99.995% pure nitrogen, exceeding the specification of UHP cylinder gas and dewars. Nitrogen is produced by utilizing a combination of state-of-the-art purification technologies and high efficiency filtration. Pressure swing absorption is utilized for the removal of O<sub>2</sub>, CO<sub>2</sub>, and water vapor. A catalyst module is incorporated in the 76-98NA to oxidize hydrocarbons from the inlet air supply. The generators also have a combination of high efficiency prefilters and a

0.01 micron (absolute) membrane filter incorporated into their design. The Parker Balston UHP Nitrogen Generators are engineered and packaged in a laboratory cabinet to fit nearly any laboratory. The systems eliminate the needs for costly, inconvenient high pressure nitrogen cylinders or dewars. The 76-97NA and 76-98NA are ideal for ICP Purge gas applications.

## Applications

Other applications include high flow GC carrier gas needs, DNA Synthesis and Sequencing Equipment, Mocon Moisture Analyzers, Circular Dichroism and Gel Permeation needs.



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**2. Payment:** Payment shall be made by Buyer within 30 days from the date of shipment. Amounts not timely paid shall bear interest at the Maximum rate permitted by law for each month or portion thereof that the Buyer is late making payment. Any claims by Buyer for omissions or shortages in a shipment shall be waived unless Seller receives notice thereof within 30 days after Buyer's receipt of the shipment.

**3. Delivery:** Unless otherwise provided on the face hereof, delivery shall be made F.O.B. Seller's plant. Regardless of the method of delivery, however, risk of loss shall pass to Buyer upon Seller's delivery to a carrier. Any delivery dates shown are approximate only and Seller shall have no liability for any delays in delivery.

**4. Warranty:** Seller warrants that the items sold hereunder shall be free from defects in material or workmanship for a period of 12 months from date of shipment to Buyer. THIS WARRANTY COMPRISES THE SOLE AND ENTIRE WARRANTY PERTAINING TO ITEMS PROVIDED HEREUNDER. SELLER MAKES NO OTHER WARRANTY, GUARANTEE, OR REPRESENTATION OF ANY KIND WHATSOEVER. ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO, MERCHANTABILITY AND FITNESS FOR PURPOSE, WHETHER EXPRESS, IMPLIED, OR ARISING BY OPERATION OF LAW, TRADE USAGE, OR COURSE OF DEALING ARE HEREBY DISCLAIMED.

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**6. Changes, Reschedules and Cancellations:** Buyer may request to modify the designs or specifications for the items sold hereunder as well as the quantities and delivery dates thereof, or may request to cancel all or part of this order, however, no such requested modification or cancellation shall become part of the contract between Buyer and Seller unless accepted by Seller in a written amendment to this agreement. Acceptance of any such requested modification or cancellation shall be at Seller's discretion, and shall be upon such terms and conditions as Seller may require.

**7. Special Tooling:** A tooling charge may be imposed for any special tooling, including without limitation, dies, fixtures, molds and patterns, acquired to manufacture items sold pursuant to this contract. Such special tooling shall be and remain Seller's property notwithstanding payment of any charges by Buyer. In no event will Buyer acquire any interest in apparatus belonging to Seller which is utilized in the manufacture of the items sold hereunder, even if such apparatus has been specially converted or adapted for such manufacture and notwithstanding any charges paid by Buyer. Unless otherwise agreed, Seller shall have the right to alter, discard or otherwise dispose of any special tooling or other property in its sole discretion at any time.

**8. Buyer's Property:** Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer or any other items which become Buyer's property, may be considered obsolete and may be destroyed by Seller after two (2) consecutive years have elapsed without Buyer placing an order for the items which are manufactured using such property. Seller shall not be responsible for any loss or damage to such property while it is in Seller's possession or control.

**9. Taxes:** Unless otherwise indicated on the face hereof, all prices and charges are exclusive of excise, sales, use, property, occupational or like taxes which may be imposed by any taxing authority upon the manufacture, sale or delivery of the items sold hereunder. If any such taxes must be paid by Seller or if Seller is liable for the collection of such tax, the amount thereof shall be in addition to the amounts for the items sold. Buyer agrees to pay all such taxes or to reimburse Seller therefore upon receipt of its invoice. If Buyer claims exemption from any sales, use or other tax imposed by any taxing authority, Buyer shall save Seller harmless from and against any such tax, together with any interest or penalties thereon which may be assessed if the items are held to be taxable.

**10. Indemnity For Infringement of Intellectual Property Rights:** Seller shall have no liability for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights except as provided in this Part 10. Seller will defend and indemnify Buyer against allegations of infringement of U.S. patents, U.S. trademarks, copyrights, trade dress and trade secrets (hereinafter 'Intellectual Property Rights'). Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on an allegation that an item sold pursuant to this contract infringes the Intellectual Property Rights of a third party. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of such allegations of infringement, and Seller having sole control over the defense of any allegations or actions including all negotiations for settlement or compromise. If an item sold hereunder is subject to a claim that it infringes the Intellectual Property Rights of a third party, Seller may, at its sole expense and option, procure for Buyer the right to continue using said item, replace or modify said item so as to make it noninfringing, or offer to accept return of said item and return the purchase price less a reasonable allowance for depreciation. Notwithstanding the foregoing, Seller shall have no liability for claims of infringement based on information provided by Buyer, or directed to items delivered hereunder for which the designs are specified in whole or part by Buyer, or infringements resulting from the modification, combination or use in a system of any item sold hereunder. The foregoing provisions of this Part 10 shall constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for infringement of Intellectual Property Rights.

If a claim is based on information provided by Buyer or if the design for an item delivered hereunder is specified in whole or in part by Buyer, Buyer shall defend and indemnify Seller for all costs, expenses or judgments resulting from any claim that such item infringes any patent, trademark, copyright, trade dress, trade secret or any similar right.

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