



Spectroscopy

Product Brochure



ENGINEERING YOUR SUCCESS.

Purity & Performance

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

Consistent, reliable purity

A steady, safe supply of high-purity gases is essential to guarantee precise results in analytical techniques such as chromatography, spectroscopy, and spectrometry. Gas purity can vary significantly from cylinder to cylinder, and impurities can be introduced via pipework during a changeover. In contrast, on-site gas generators supply consistently high-purity gas, prevent variations and ensure ultra-sensitive analysis, every time.

Supported by proven, advanced technologies you can trust, Parker gas generators deliver the reliability and consistency you depend on.

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. Parker gas generators are equipped with standard leak detection technology 'auto shut off' and integral alarm. Operating at a fraction of pressure with low volumes of stored gas, they are a safer alternative to cylinders and further reduce potential for harm.

Cost-efficient with the lowest lifetime cost

Energy-efficient technologies combined with minimal required maintenance keep operational costs down, and often payback can be realized just one year after purchase. On-demand gas generation eliminates unexpected charges, delivery costs, cylinder rental or storage fees.

Global support for your peace of mind

We know that business continuity is vital to success. That's why Parker offers a comprehensive package of expert service, care, and maintenance across our complete analytical gas systems range, worldwide. From installation to scheduled maintenance, and even emergency assistance, you can rely on Parker for total 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. Designed for easy installation, operation, long-term performance, and permanent point-of-use installation, an on-site generator provides direct access to an unlimited supply of gas. Always at the correct pressure, flow, pressure and purity, Parker gas generators improve the stability of instruments and the accuracy of results.



FT-IR Purge Gas Generators

Spectra 15, Spectra 30, & Model 75-62

The Parker 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.

- Compact design frees floor space
- Spectra models are wall mountable
- Improves signal-to-noise ratio even on non-purge systems
- Increases FT-IR sample throughput and maximizes up-time
- Recommended by all major FT-IR manufacturers
- Typical payback period of less than 1 year
- Easy installation and quiet operation

The generators supply carbon dioxide-free air at less than -100°F (-73°C) dew point with no suspended impurities larger than $0.01\text{ }\mu\text{m}$. Designed to operate continuously, the Spectra significantly reduces operating costs of FT-IR instrumentation. It generates cleaner background spectra in a shorter period of time along with a more accurate analysis by improving the signal-to-noise ratio. Ideally suited for use with CO₂ Analyzers and Matrix GC's in addition to supplying gas to other laboratory instruments, these generators supply carbon dioxide-free air at less than -100°F (-73°C) dewpoint with no suspended impurities larger than $0.01\text{ }\mu\text{m}$.

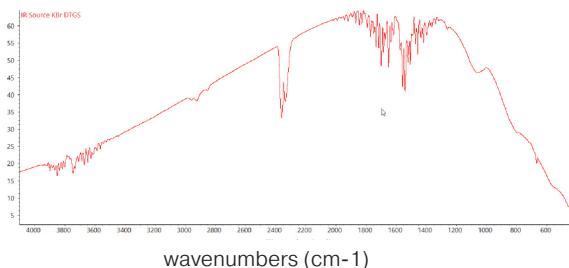


Spectra 15 

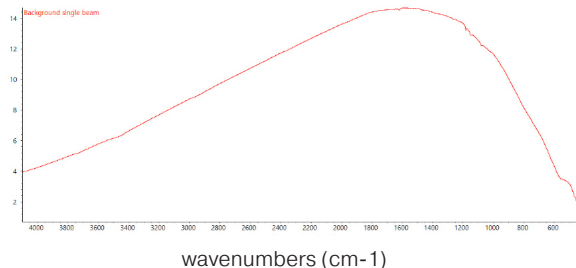
Comparative Spectral Analysis in Purging an FT-IR Sample Chamber

The spectrum collected without purge gas is extremely noisy in several regions. When the sample is purged with a Parker Purge Gas Generator, water vapor and CO₂ are removed and the noise in the spectrum is removed so that important features in the spectrum can be observed.

Single Beam Unpurged



Single Beam Purged



Both samples were created using a Thermo-Nicolet iS 10 FTIR Spectrometer.

Principal Specifications

Model	Spectra 15	Spectra 30	75-62
Minimum/Maximum Inlet Air Pressure		60 psig/125 psig	
Flow Rate at Min. Inlet Air Pressure	18 scfh (9 lpm)	36 scfh (17 lpm)	120 scfh (57 lpm)
Flow Rate at Max. Inlet Air Pressure	36 scfh (17 lpm)	72 scfh (34 lpm)	216 scfh (102 lpm)
CO ₂ Concentration		< 1 ppm	
Dewpoint		-100°F (-73°C)	
Maximum Inlet Air Temperature ¹		78°F (25°C)	
Air Consumption for regeneration ²	30 scfh (14 lpm)	60 scfh (28 lpm)	120 scfh (57 lpm)
Inlet/Outlet Port Size		50°F/104°F (10°F/40°F)	
Electrical requirements ³		90-250 VAC/50-60 Hz	
Dimensions		29" w x 53" d x 76" h (74 cm x 51 cm x 193 cm)	
Shipping Weight	26 lbs (12 kg)	60 lbs (27 kg)	88 lbs (40 kg)

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

2. Total air consumption = regeneration flow + flow demand

3. Units provided with universal power supply

Ordering Information

Model	Spectra 15	Spectra 15	75-62
Annual Maintenance Kit	MKSPECTRA15	MKSPECTRA30	MK7520
Installation Kit for All Models	IK-0001*	IK-0001*	IK-0002*
Annual Maintenance Kit Part Number	MKSpecrtra15-12M	MKSpectra30-12M	MK7520
Preventive Maintenance Plan	75-45-PM	75-52-PM	75-62-PM
Extended Support with 24 Month Warranty	75-45-EN2	75-52-EN2	75-62-EN2

*Consult factory for tubing needs

"A Parker 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 (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 systems, they have requested that Parker Hannifin participate in future workshops."

Dr. James A. de Haseth and Dr. Peter R. Griffiths

for assistance, call 800-343-4048

Self-Contained FT-IR Purge Gas Generator

Model 74-5041NA

The Parker Self-Contained FT-IR Purge Gas Generator completely eliminates the inconvenience and the high costs of nitrogen cylinders and dewars, plus significantly reduces the costs of operating FT-IR instruments. The Model 74-5041NA generates cleaner background spectra in a shorter period of time as well as more accurate analysis by improving the signal-to-noise ratio. It provides instruments with CO₂-free compressed air at less than -100°F (-73°C) dewpoint with no suspended impurities larger than 0.01 micron, and is quiet, reliable, and easy to install. Simply attach the outlet airline, plug the electrical cord into a wall outlet, and the unit is ready for operation.

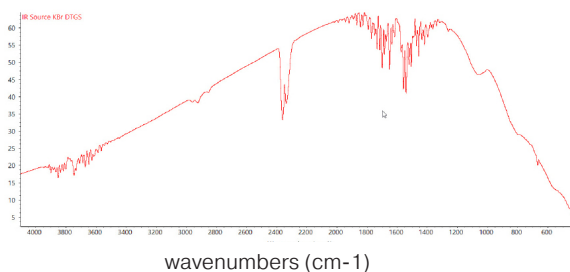
- Includes state-of-the-art, oil-less compressor
- Compact, portable design is ideal for mobile labs
- Improves signal-to-noise ratio even on non-purge systems
- Increases FT-IR sample thru-put and maximizes up-time
- Special sound insulation design ensures quiet operation



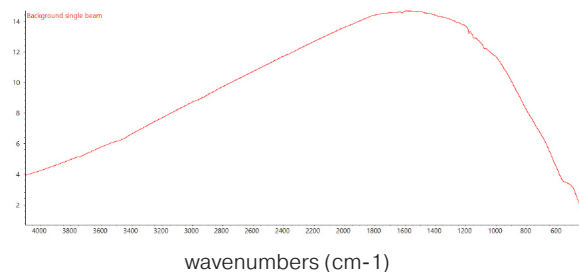
Comparative Spectral Analysis in Purging an FT-IR Sample Chamber

The spectrum collected without purge gas is extremely noisy in several regions. When the sample is purged with a Parker Purge Gas Generator, water vapor and CO₂ are removed and the noise in the spectrum is removed so that important features in the spectrum can be observed.

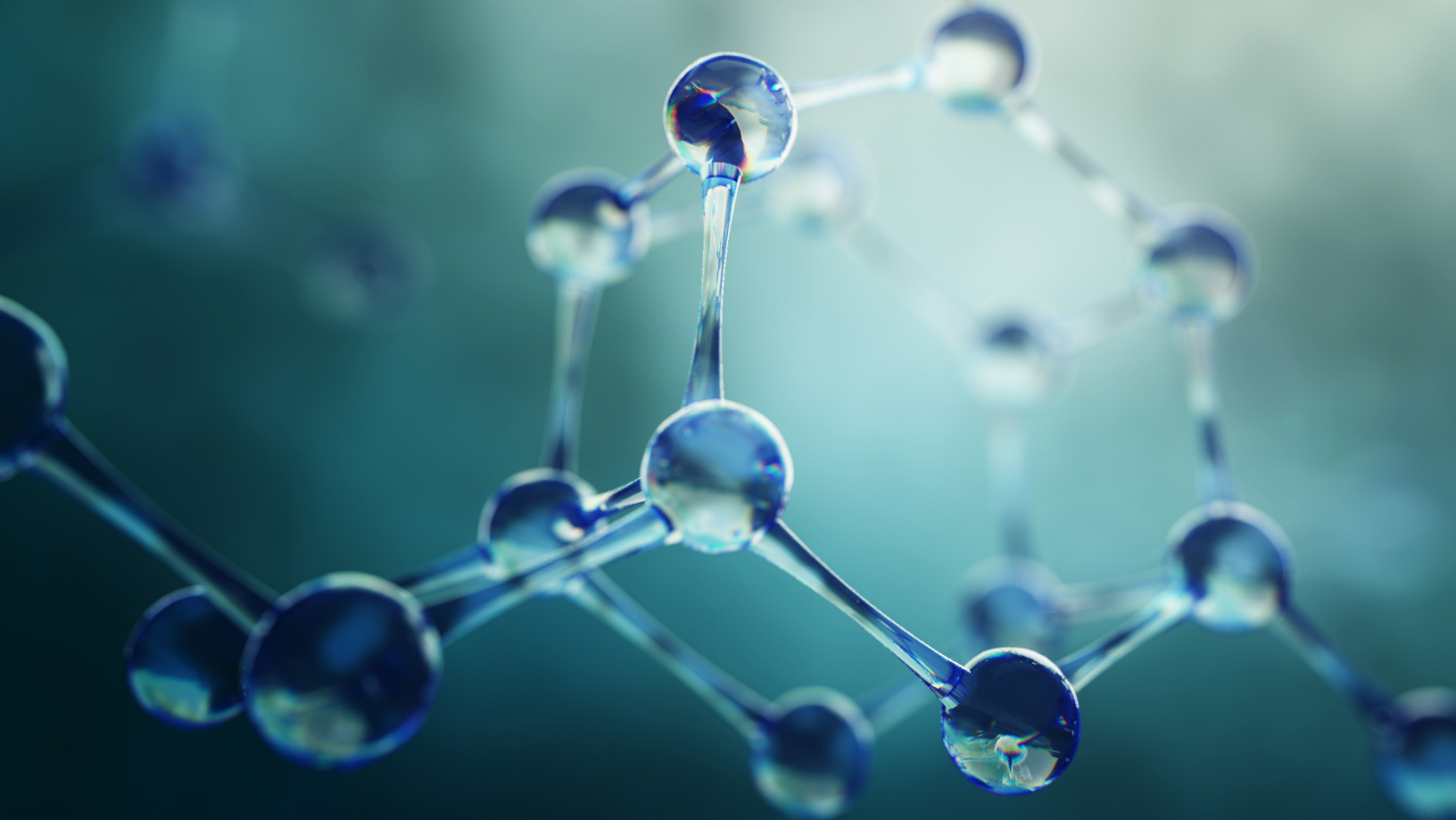
Single Beam Unpurged



Single Beam Purged



Both samples were created using a Thermo-Nicolet iS 10 FTIR Spectrometer.



Principal Specifications

Model 74-5041NA	
Maximum Flow Rate (at 80 psig)	60 SCFH (28 lpm)
Maximum Output Pressure	80 psig
CO2 Concentration	< 1 ppm
Dewpoint	-100°F (-73°C)
Outlet Port Size	Female 1/4" NPT
Minimum/Maximum Ambient Temperature	30°F/90°F (-1°C/32°C)
Electrical requirements (single phase)	120 VAC/60 Hz, 20 amps
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)

Ordering Information

Description	Model
FT-IR Purge Gas Generator	74-5041NA
Annual Maintenance Kit	74065
Annual Maintenance Kit Part Number	74065
Preventive Maintenance Plan	74-5041-PM
Extended Support with 24 Month Warranty	74-5041-EN2

for assistance, call 800-343-4048

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Carson, California
310 608 5600

Engine Mobile Aftermarket Division
Kearney, Nebraska
308 234 1951

Engine Mobile Original Equipment Division
Modesto, California
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State of California ONLY
WARNING: Proposition 65
The products described herein can expose you to chemicals known to the State of California to cause cancer or reproductive harm.
For more information: www.P65Warnings.ca.gov