

Analytical Gas Systems

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



ENGINEERING YOUR SUCCESS.

Parker domnick hunter

Technology you can trust

Parker domnick hunter is the leading provider of Gas Systems for the Analytical Instrument market. Generators are specifically designed to meet the stringent gas requirements for all the leading Analytical Instrument manufacturers including Agilent, Thermo Fisher, Waters, Shimadzu, AB Sciex, Perkin Elmer and many others.

Utilising Parker's range of patented proprietary technologies, there are 1,000's of systems installed worldwide. These technologies offer some unique performance benefits, including guaranteed ultra high purity gas, silent operation, minimal moving parts and minimal operator attention. It is **technology you can trust**.

Improved instrument performance

Consistent gas quality and pressure improves stability and ensures greater reproducibility of results.

Convenience

No changing of gas cylinders or liquid dewars. On-demand supply 24/7 - generate gas as and when required.

Safety

Eliminate high pressure gas cylinders and liquid dewars from your laboratory.

Eliminates manual handling, reducing Health and Safety risks.

Cost

Payback in less than 18 months. Minimal ongoing maintenance costs.

No more gas costs, delivery and rental charges.



The End for High-Pressure Gas Cylinders?



High-pressure gas cylinders are a common sight in many laboratories: a default for supplying analytical instruments with their gas requirements, high-pressure gas cylinders are familiar and provide the gas that's required, so it could be said that the old adage, 'if it isn't broke, don't fix it', could well apply.

Despite this, increasing numbers of analytical instrument users are choosing to supply their GC FID, LC/MS and other types of instrument with gas via an analytical gas generator. Driving this decision will be a combination of factors broadly grouped into four areas; safety, cost, convenience and purity.

Safety Concerns...

High-pressure gas cylinders can provoke safety concerns in a number of different ways, some with potentially fatal consequences. The presence of high-pressure gas cylinders in the laboratory has been likened to sharing the laboratory with a potential missile. This stems from the behaviour of a cylinder that suddenly de-pressurises. There is enough force released with a European 'L' size cylinder to accelerate the cylinder to something like 66mph or 108km/h in around 1/10 seconds. Cylinders weigh in at 200lb (98kg), so there'll be enough momentum to cause some severe damage.

It's because of this potential 'missile scenario' that cylinders tend to be strapped down to something fixed. Even restrained, should a large cylinder suddenly vent its contents into the laboratory, then there are potentially fatal consequences. For example, if a high-pressure cylinder of nitrogen suddenly vented into the atmosphere of a laboratory, then more than 9,000 litres of un-breathable gas would be released.

This would dramatically reduce the oxygen content of the air - presenting the possibility of asphyxiation. The risk of oxygen displacement from the atmosphere is also associated with liquefied gases whose volume will increase as much as 1,000 fold when in the gas phase. This means liquid nitrogen dewars can also be hazardous.

If the gas suddenly venting was a potentially explosive gas, as in the case of hydrogen, the result could be much more dramatic. Hydrogen will form an explosive mixture at just 4% volume in air.

These possibilities are the life threatening safety concerns associated with high-pressure gas cylinders. However, there is still the potential for other non-fatal injuries. The practice of rolling cylinders on their bottom edge comes with the risk of trapping toes or feet. With the 'smaller' cylinders there is also potential for heavy lifting injuries when being placed on a bench top.

Costs Increase Whilst Convenience and Purity are Reduced...

With high pressure cylinders the storage requirements are dictated by safety concerns, such as separating hydrogen cylinders and cylinders of oxidising gases. These often result in cylinders being some distance from where the gas is used and hence long gas lines. Whilst the longer gas lines result from the positioning of cylinders for safety concerns, the impact will be in the areas of cost, convenience and purity.

With any gas line there is the potential for leaks, and the longer the line the greater the potential. Hence the requirement to regularly leak-check the gas supply line - this both increases costs and decreases convenience - whilst leaks allow gas to escape and also allow impurities to enter the gas supply, which reduces purity and influences the accuracy of any analysis.

A Smarter Choice...

Analytical gas generators can remove the requirement for high-pressure cylinder gases for many analytical instrument users. Analytical gas generators are typically placed next to the instrument they're servicing. This removes any need for extended gas lines and with them associated problems impacting on purity, cost and convenience.

There are inherent features both in the design and the way in which generators operate which offer clear compelling reasons to switch from high-pressure gas cylinders. The latest gas generators utilise new technologies including

adsorbents, catalysts, and specialist micro dryers, to produce ultra high purity gases. Generators are designed to be used at the point of use, simplifying and minimising the amount of pipe work, and guaranteeing ultra high purity gas reaching the instrument.

The generators are designed to run continuously with minimal annual maintenance and therefore minimal disruption to the gas supply. This all but eliminates the introduction of impurities, which can be reduced further by the installation of in line purifiers.

Increased Safety...

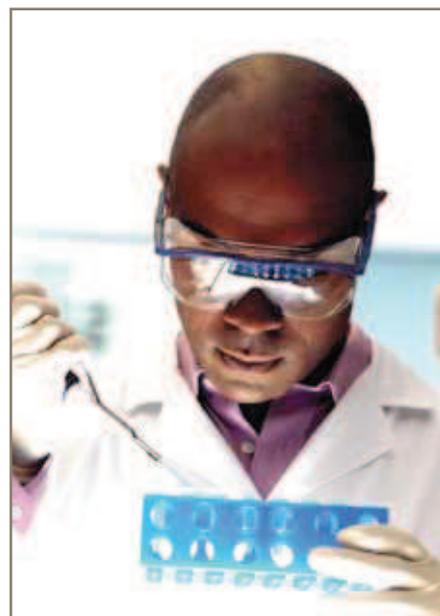
High-pressure gas cylinders will contain gas which is at a pressure of 200 to 300 times atmospheric pressure, and gas which is released to atmospheric pressure would have a volume in the region of 9,000 litres. Analytical gas generators operate at a fraction of this pressure and have very low volumes of stored gas within them. One of Parker domnick hunter's market leading hydrogen generators, for example, will have just 50 ml of stored gas, which will be at a maximum of around 5 times atmospheric pressure. Hence the missile concern is removed with a generator, and there's no large volume of gas to suddenly vent and make the atmosphere potentially explosive or deficient of life-supporting oxygen. Additional safety features are also incorporated in the design; for example, in Parker domnick hunter hydrogen generators there are leak detection auto shut-off devices.

Increased Convenience...

High-pressure gas cylinders will require regular replacement. Gas cylinders running out part way through analysis will result in unplanned downtime, and a replacement cylinder has to be collected and the old one removed which brings manual handling and safety concerns. After the new cylinder has been connected restarting the instrument, and waiting for stable baseline and



(continued)



re-calibration, are required before samples can be run. Life is more convenient with a gas generator as there's no unplanned downtime. Analytical gas generators only require simple quick maintenance which can be planned for – they don't unexpectedly run-out of gas halfway through analysis.

Increased Purity...

Analytical gas generators provide a constant source of gas. This removes the variations in purity between cylinders, helping to improve sensitive analyses. Purity is also preserved because there is no chance for impurities to enter the gas pipes, which may happen as cylinders are switched and regulators changed-over.

Reduced Cost...

High-pressure gas cylinders can also prove to be costly: typical payback periods for analytical gas generators are short – sometimes less than one year. The cost of using high pressure cylinders is not just the cost of the gas itself but other charges, some of which can be seen and others which are hidden. Cylinder rental and delivery charges are readily apparent, however there's also hidden costs. These must also be included to reveal the true cost.

Unlike cylinders, Analytical Gas Systems have no hidden costs. There are no recurring costs with generators for activities such as ordering replacement cylinders, there are no storage costs for the spare and empty cylinders, and there is no cost of lost productivity through the need to stop and replace cylinders.

Innovative Technology...

Parker domnick hunter analytical gas generators are world renowned for their reliability, dependability and long life. Since commercializing their first laboratory scale analytical gas generator in the 1980s, Parker domnick hunter now serve an installed customer base of over 40,000 gas generator users globally.

Part of the reason behind this is the unique innovative technology employed in Parker domnick hunter generators, from carbon molecular sieve, to the use of robust hydrogen membranes.

A Smarter Choice for LC/MS...

Providing nitrogen for uses such as LC/MS, Parker domnick hunter's pressure swing adsorption nitrogen generators represent state-of-the-art technology. The carbon molecular bed simply and efficiently separates compressed air into nitrogen. The carbon molecular bed achieves this due to its selective adsorption capabilities for different gases – oxygen and other unwanted constituents of the compressed air are simply removed by desorption – the complete process is monitored by a sophisticated control system.

These generators, when connected to an existing compressed air supply, will provide a constant supply of nitrogen with limited moving parts inside the generator. This means that the generator is very quiet whilst operating and there are minimal replacement parts.

A Smarter Choice for GC...

Hydrogen offers advantages for GC users when used as a carrier gas. The Van Deemter curves illustrate the wide range over which high efficiency is obtained, making hydrogen the best carrier gas for samples containing compounds which elute over a wide temperature range. The risks associated with high-pressure gas cylinders have already been outlined – hence a gas generator is the smarter choice for hydrogen. The optimised design of Parker domnick hunter hydrogen generators take deionised water and, through electrolysis, separate the hydrogen. This is then purified using desiccants, and specialist micro dryers.

An End For Cylinders?

With the improvements that gas generators offer in the areas of safety, purity, convenience and cost there's little reason to use high-pressure gas cylinders with instruments such as GC and LC/MS. The range of Parker domnick hunter analytical gas generators also extends its technologically innovative approach to other techniques such as FT-IR, TOC, ICP, ELSD and Atomic Absorption.

Zero Nitrogen Generators

for GC makeup gas and carrier gas applications



The Parker domnick hunter G5 zero nitrogen generators employ robust, field proven technology to produce ultra high purity nitrogen for GC makeup and carrier gas applications. An integral heated platinum catalyst ensures carrier grade nitrogen free from organic impurities.

The G5 generators provide a continuous stream of ultra high purity nitrogen from a single 'plug & play' unit. Models are available with and without an integral oil free compressor, are extremely quiet in operation and are fully approved for use by major instrumentation manufacturers.

Innovative design and technology facilitate maximum instrument uptime, attractive return on investment and proven analytical performance, eliminating the need for other modes of supply.



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Product Features:

- **Ultra high purity, organic free, nitrogen**
- **Ideal for GC make-up and carrier gas applications including ECD**
- **Integral oil free compressor, with noise reduction technology**
- **Eliminate inconvenient and potentially dangerous nitrogen cylinders**
- **Compact, reliable with minimal operator attention and maintenance**
- **Phthalate-free componentry**

Product Selection

Model	Flow Rate	Purity*	Inlet Air @ 7 bar g (101.5 psi g)	Delivery Pressure		Integral Compressor	
	L/min			ppm organic impurity	%		L/min
G5000	1	<0.1 Total Hydrocarbons	>99.999	12	5	72.5	NO
G5010	1	<0.1 Total Hydrocarbons	>99.999	n/a	5	72.5	YES

*Purity with respect to oxygen

Note: Add suffix 'E' for 207-253V 50/60Hz ie G5000-E
Add suffix 'W' for 103 -126V 60Hz ie G5000-W

Technical Data

Ambient Temperature Range	5 - 45°C 41 - 113°F
Inlet Air Quality†	Clean dry compressed air ISO8573-1:2001 Class 2.-.1
Supply Voltage Range	103 - 126V 60Hz 207 - 253V 50/60Hz
Port Connections	Inlet† Outlet
	1/4" Compression Fitting 1/8" Compression Fitting

†Non compressor models only

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight (with compressor)		Weight (without compressor)	
	mm	in	mm	in	mm	in	kg	lb	kg	lb
G5 range	842	33.1	345	13.6	413	16.3	55	121.3	51	112.4

Preventative Maintenance

Preventative Maintenance Kit	Part Number	Change Frequency
Filter Kit - G5 option 0 (no compressor)	606272355	12 months
Filter Kit - G5 option 1 (compressor)	606272356	12 months
Compressor Kit 230V - G5 option 1	606272336	12 months
Compressor Kit 120V - G5 option 1	606272337	12 months

High Purity Nitrogen Generators

for GC and other critical analytical applications



The Parker domnick hunter G1 and G2 nitrogen gas generators employ robust, field proven technology to produce ultra high purity nitrogen for critical life science, chemical analysis and spectroscopy applications. Flow rates range from 0.55 L/min to 3 L/min, with purities >99.999%.

The G1 and G2 generators provide a continuous stream of ultra high purity nitrogen from a single 'plug & play' unit. Models are available with and without an integral oil free compressor, are extremely quiet in operation and are fully approved for use by major instrumentation manufacturers.

Innovative design and technology facilitate maximum instrument uptime, attractive return on investment and proven analytical performance, eliminating the need for other modes of supply.



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Product Features:

- **Complete 'Plug and Play' system specifically designed for critical analytical applications**
- **Produces a continuous supply of 99.999% purity nitrogen 24 hours a day**
- **Integral oil free compressor, with noise reduction technology**
- **Eliminate inconvenient and potentially dangerous nitrogen cylinders**
- **Compact, reliable with minimal operator attention and maintenance**
- **Phthalate-free componentry**

Product Selection

Model	Flow Rate	Purity*	Inlet Air @ 7 bar g (101.5 psi g)	Outlet Pressure		Integral Compressor
	L/min	%	L/min	bar g	psi g	
G1000	0.55	>99.999	7	5	72.5	NO
G1010	0.55	>99.999	n/a	5	72.5	YES
G1100	0.75	>99.999	9	5	72.5	NO
G1110	0.75	>99.999	n/a	5	72.5	YES
G2000	1.5	>99.999	18	5	72.5	NO
G2010	1.5	>99.999	n/a	5	72.5	YES
G2100	3.0	>99.999	36	5	72.5	NO
G2110	3.0	>99.999	n/a	5	72.5	YES

*Purity with respect to oxygen

Note: Add suffix 'E' for 207-253V 50/60Hz ie. G1000-E
Add suffix 'W' for 103 -126V 60Hz ie. G1000-W

Technical Data

Ambient Temperature Range	5 - 45°C 41 - 113°F
Inlet Air Quality†	Clean dry compressed air ISO8573-1:2001 Class 2.-.1
Supply Voltage Range	103 - 126V 60Hz 207 - 253V 50/60Hz
Port Connections	1/4" Compression Fitting 1/8" Compression Fitting 1/4" Compression Fitting

†Non compressor models only

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight (with compressor)		Weight (without compressor)	
	mm	in	mm	in	mm	in	kg	lb	kg	lb
G1 range	842	33.1	345	13.6	413	16.3	57	125.7	53	116.8
G2 range	874	34.4	345	13.6	663	26.1	90	198.4	77	169.7

Preventative Maintenance

Preventative Maintenance Kit G1	Part Number	Change Frequency
Filter Kit - G1 option 0 (no compressor)	606272350	12 Months
Filter Kit - G1 option 1 (compressor)	606272351	12 Months
Compressor Kit 230V - G1 option 1	606272336	24 Months
Compressor Kit 120V - G1 option 1	606272337	24 Months

Preventative Maintenance Kit G2	Part Number	Change Frequency
Filter Kit - G2 option 0 (no compressor)	606272350	12 Months
Filter Kit - G2 option 1 (compressor)	606272352	12 Months
Compressor Kit 230V - G2 option 1	606272334	12 Months
Compressor Kit 120V - G2 option 1	606272335	12 Months

High Purity Nitrogen and Dry Air Generators

Analytical instrumentation



The Parker domnick hunter G6 and G7 nitrogen and dry air generators employ robust, field proven technology to produce ultra high purity nitrogen and dry air suitable for chemical analysis applications.

The G6 and G7 generators provide a continuous stream of nitrogen and dry air from a single 'plug & play' unit, are extremely quiet in operation and are fully approved for use by major instrumentation manufacturers.

Innovative technology, design and function combine to completely eliminate all other modes of supply, facilitating maximum instrument uptime, attractive return on investment and proven analytical performance.



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Product Features:

- Ideal for analytical instruments that require high purity nitrogen and air
- Produces a continuous supply of high purity nitrogen 99.999% and dry air
- Integral oil free compressor, with noise reduction technology
- Eliminate inconvenient and potentially dangerous nitrogen cylinders
- Compact, reliable with minimal operator attention and maintenance
- Improve analysis and reproducibility with guaranteed high purity gas

Product Selection

Model	Flow Rate		Purity*		Delivery Pressure		Integral Compressor
	Nitrogen	Dry Air	Nitrogen	Dry Air	bar g	psi g	
	L/min	L/min	%	°C (dew point)			
G6010	0.60	1.5	>99.999	-40	5	72.5	YES
G7010	3	3	>99.999	-40	5	72.5	YES

*Purity with respect to oxygen

Note: Add suffix 'E' for 207-253V 50/60Hz ie G6010-E
Add suffix 'W' for 103 -126V 60Hz ie G6010-W

Technical Data

Ambient Temperature Range	5 - 45°C 41 - 113°F
Supply Voltage Range	103 - 126V 60Hz 207 - 253V 50/60Hz
Port Connections	Outlet (G6010) Outlet (G7010)
	1/8" Compression Fitting 1/4" Compression Fitting

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight	
	mm	in	mm	in	mm	in	kg	lb
G6010	842	33.1	345	13.6	413	16.3	58	127.9
G7010	874	34.4	345	13.6	663	26.1	93	205

Preventative Maintenance

Preventative Maintenance Kit G6	Part Number	Change Frequency
Filter Kit - G6 option 1 (compressor)	606272351	12 Months
Compressor Kit 230V - G6 option 1	606272336	12 Months
Compressor Kit 120V - G6 option 1	606272337	12 Months
Preventative Maintenance Kit G7	606272337	12 Months
Filter Kit - G7 option 1 (compressor)	606272352	12 Months
Compressor Kit 230V - G7 option 1	606272334	12 Months
Compressor Kit 120V - G7 option 1	606272335	12 Months

Gas Generators for LC/MS

Nitrogen Generators

for LC/MS applications - with optional economy mode



The Parker domnick hunter LCMS nitrogen gas generators employ robust, field proven technology to meet the drying, sheath and nebulisation gas requirements of today's latest LC/MS instrumentation. Five models operate at flow rates from 15 L/min to 50 L/min.

The LCMS generators provide a continuous stream of high purity nitrogen from a single 'plug & play' unit. Models are available with and without an integral oil free compressor, are extremely quiet in operation and are fully approved for use by major instrumentation manufacturers.

Innovative design and technology facilitate maximum instrument uptime, attractive return on investment and proven analytical performance, eliminating the need for other modes of supply.



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Product Features:

- Ultra high purity, organic free, nitrogen
- Produces a continuous supply of LC/MS grade nitrogen 24 hours a day
- Integral oil free compressor, with noise reduction technology
- Optional ECOMax economy module to increase compressor life
- Compact, reliable with minimal operator attention and maintenance
- Phthalate-free componentry

Product Selection

Model	Flow Rate		Purity*	Air Inlet @ 8.5 bar g (123.3 psi g)	Delivery Pressure		Integral Compressor
	L/min	%			L/min	bar g	
LCMS15-0	15	>99	>99	70	7	101.5	NO
LCMS15-1	15	>99	>99	n/a	7	101.5	YES
LCMS20-0	20	>99	>99	70	7	101.5	NO
LCMS20-1	20	>99	>99	n/a	7	101.5	YES
LCMS30-0	30	>99	>99	130	7	101.5	NO
LCMS30-1	30	>99	>99	n/a	7	101.5	YES
LCMS40-0	40	>99	>99	130	7	101.5	NO
LCMS50-0	50	>98	>98	130	7	101.5	NO

*Purity with respect to oxygen

Note: Add suffix 'E' for 207-253V 50/60Hz ie LCMS15-0-E Add suffix 'W' for 103 -126V 60Hz ie LCMS15-0-W

Technical Data

Ambient Temperature Range	5 - 40°C 41 - 104°F
Inlet Air Quality †	Clean dry compressed air ISO8573-1:2001 Class 2.-.1
Supply Voltage Range	103 - 126V 60Hz 207 - 253V 50/60Hz
Port Connections Nitrogen Outlet / Air Inlet †	1/4" Compression Fitting

†Non compressor models only

LCMS-ECOMax Add-on-Module (Optional Extra)

Product	Description	Compatibility	Installation	Height (H)		Width (W)		Depth (D)		Weight	
				mm	in	mm	in	mm	in	Kg	lb
LCMS-ECOMax-230V	Enables economy mode cycle supplying nitrogen gas only when required, whilst maintaining constant purity	LCMS15-50 models with and without integral compressor	All required fittings supplied with ECOMax module	103	4.06	303	11.93	408	16.06	7.8	17.2

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight (with compressor)	
	mm	in	mm	in	mm	in	kg	lb
LCMS 15-1	705	27.8	510	20.1	826	32.5	129	284
LCMS 20-1	705	27.8	510	20.1	826	32.5	129	284
LCMS 30-1	705	27.8	510	20.1	826	32.5	129	284

Model	Height (H)		Width (W)		Depth (D)		Weight (without compressor)	
	mm	in	mm	in	mm	in	kg	lb
LCMS 15-0	705	27.8	510	20.1	559	22.0	89	196
LCMS 20-0	705	27.8	510	20.1	559	22.0	89	196
LCMS 30-0	705	27.8	510	20.1	760	22.9	135	298
LCMS 40-0	705	27.8	510	20.1	760	22.9	135	298
LCMS 50-0	705	27.8	510	20.1	760	22.9	135	298

Preventative Maintenance

Preventative Maintenance Kit	Part Number	Change Frequency
Filter Kit - all models	606272251	12 Months
Compressor Kit 230V - Option 1 models	606272253	12 Months
Compressor Kit 120V - Option 1 models	606272261	12 Months

Nitrogen Generators

for Agilent 6400 & 6500 LC/MS instruments



The Parker domnick hunter LCMS64/65 dual flow nitrogen gas generators employ robust, field proven technology to meet the drying, sheath, nebulisation and collision gas requirements of the Agilent Technologies QQQ & Q-TOF instrumentation portfolio.

The LCMS64/65 generators provide two continuous streams of high purity nitrogen from a single 'plug & play' unit. Models are available both with and without an integral oil free compressor, are extremely quiet in operation, and fully approved for use by major instrumentation manufacturers.

Innovative design and technology facilitate maximum instrument uptime, attractive return on investment and proven analytical performance, eliminating the need for other modes of supply.



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Product Features:

- **Complete 'Plug and Play' system specifically designed for the Agilent 6400 & 6500**
- **Produces a continuous supply of LC/MS grade nitrogen 24 hours a day**
- **Integral oil free compressor, with noise reduction technology**
- **Eliminate inconvenient and potentially dangerous nitrogen cylinders**
- **Compact, reliable with minimal operator attention and maintenance**
- **Phthalate-free componentry**

Product Selection

Model	Flow Rate		Purity*		Air Inlet @ 8.5 bar g (123.3 psi g)	Delivery Pressure		Integral Compressor
	Drying, sheath & Nebulisation Nitrogen	Collision cell Nitrogen	Drying, sheath & Nebulisation Nitrogen	Collision cell Nitrogen		bar g	psi g	
	L/min	ml/min	%	%	L/min			
LCMS64-0	18	200	>98	>99.999	90	6.8	98.6	NO
LCMS64-1	18	200	>98	>99.999	n/a	6.8	98.6	YES
LCMS65-0	30	200	>98	>99.999	90	6.8	98.6	NO
LCMS65-1	30	200	>98	>99.999	n/a	6.8	98.6	YES

*Purity with respect to oxygen

Note: Add suffix 'E' for 207-253V 50/60Hz ie LCMS64-0-E
Add suffix 'W' for 103 -126V 60Hz ie LCMS64-0-W

Technical Data

Ambient Temperature Range	5 - 40°C 41 - 104°F
Inlet Air Quality †	Clean dry compressed air ISO8573-1:2001 Class 2.-.1
Supply Voltage Range	103 - 126V 60Hz 207 - 253V 50/60Hz
Port Connections Nitrogen Outlet Air Inlet †	1/4" Compression Fitting 1/4" Compression Fitting

†Non compressor models only

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight	
	mm	in	mm	in	mm	in	kg	lb
LCMS64-0	705	27.8	510	20.1	559	22	103	227
LCMS64-1	705	27.8	510	20.1	826	32.5	143	315
LCMS65-0	705	27.8	510	20.1	559	22	103	227
LCMS65-1	705	27.8	510	20.1	826	32.5	143	315

Preventative Maintenance

Preventative Maintenance Kit	Part Number	Change Frequency
Filter Kit	606272251	12 Months
Compressor Kit 230V - Option 1 models	606272253	12 Months
Compressor Kit 120V - Option 1 models	606272261	12 Months

Nitrogen and Dry Air Generators

for LC/MS instruments



The Parker domnick hunter LCMS20/3 dual flow nitrogen and dry air generators employ robust, field proven technology to meet the nebulisation requirements of LC/MS instruments, both in positive and negative ionisation mode.

The LCMS20/3 generators provide two continuous streams of high purity nitrogen and dry air from a single 'plug & play' unit. Models are available with and without an integral oil free compressor, are extremely quiet in operation and are fully approved for use by major instrumentation manufacturers.

Innovative design and technology facilitate maximum instrument uptime, attractive return on investment and proven analytical performance, eliminating the need for other modes of supply.



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Product Features:

- **Complete 'Plug and Play' system specifically designed for LC/MS**
- **Produces a continuous supply of LC/MS grade nitrogen 24 hours a day**
- **Integral oil free compressor, with noise reduction technology**
- **Eliminate inconvenient and potentially dangerous nitrogen cylinders**
- **Compact, reliable with minimal operator attention and maintenance**
- **Phthalate-free componentry**

Product Selection

Model	Flow Rate		Purity*		Air Inlet @ 8.5 bar g (123.3 psi g)	Delivery Pressure		Integral Compressor
	Nebulisation Nitrogen (positive ionisation mode)	Nebulisation Dry Air (negative ionisation mode)	Nebulisation Nitrogen (positive ionisation mode)	Nebulisation Dry Air (negative ionisation mode)		bar g	psi g	
	L/min	L/min	%	°C (dew point)				
LCMS20/3-0	20	3	>99	-40	85	7	101.5	NO
LCMS20/3-1	20	3	>99	-40	n/a	7	101.5	YES

*Purity with respect to oxygen

Note: Add suffix 'E' for 207-253V 50/60Hz ie. LCMS20/3-0-E
Add suffix 'W' for 103 -126V 60Hz ie. LCMS20/3-0-W

Technical Data

Ambient Temperature Range	5 - 40°C 41 - 104°F
Inlet Air Quality †	Clean dry compressed air ISO8573-1:2001 Class 2.-.1
Supply Voltage Range	103 - 126V 60Hz 207 - 253V 50/60Hz
Port Connections	Outlet Inlet †
	1/4" Compression Fitting 1/4" Compression Fitting

†Non compressor models only

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight	
	mm	in	mm	in	mm	in	kg	lb
LCMS20/3-0	705	27.8	510	20.1	559	22	103	227
LCMS20/3-1	705	27.8	510	20.1	826	32.5	143	315

Preventative Maintenance

Preventative Maintenance Kit	Part Number	Change Frequency
Filter Kit	606272251	12 Months
Compressor Kit 230V - Option 1 models	606272253	12 Months
Compressor Kit 120V - Option 1 models	606272261	12 Months

MIDIGAS LAB

for multiple LC/MS and centralised laboratory supply applications



The Parker domnick hunter MIDIGAS LAB nitrogen gas generators employ robust, field proven technology to produce high purity nitrogen for a number of medium flow, high demand analytical applications, such as multiple LC/MS installations. Flow rates range from 9 L/min to 408 L/min, with purities from >95% to >99.999%.

The MIDIGAS LAB generators provide a continuous stream of high purity nitrogen from a innovative modular unit. Models are available with or without an external compressed air system, and offer a compelling alternative to other modes of supply such as cylinders or liquid.

Innovative design and technology facilitate maximum instrument uptime, attractive return on investment and proven analytical performance.



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Product Features:

- **Innovative modular system specifically for multiple LC/MS and centralised supply applications**
- **Produces a continuous stream of high purity analytical grade nitrogen 24 hours a day**
- **Integral automatic economy mode and continuous purity monitoring**
- **Digital and analogue outputs of remote monitoring and alarm capabilities**
- **Eliminate inconvenient and potentially dangerous nitrogen cylinders and dewars**
- **Robust, reliable with minimal operator attention and maintenance**

Product Selection

Performance data is based on 7 bar g (100 psi g) air inlet pressure and 20° - 25°C (66° - 77°F) ambient temperature. Consult Parker for performance under other specific conditions.

Nitrogen flow rate m ³ /hr vs Purity (Oxygen Content)												
Model	Unit	10ppm	100ppm	250ppm	500ppm	0.1%	0.5%	1.0%	2.0%	3.0%	4.0%	5.0%
MIDIGAS2 LAB	m ³ /hr	0.55	1.2	1.5	1.9	2.4	3.4	4.3	5.8	7.2	8.4	9.4
	cfm	0.3	0.7	0.9	1.1	1.4	2.0	2.5	3.5	4.2	4.9	5.5
MIDIGAS4 LAB	m ³ /hr	1.2	2.4	3.2	3.9	4.7	6.9	8.5	11.6	14.3	16.7	18.8
	cfm	0.7	1.4	1.9	2.3	2.8	4.1	5.0	6.8	8.4	9.8	11.1
MIDIGAS6 LAB	m ³ /hr	1.5	3.2	4.2	5.3	6.5	9.5	11.5	15.2	18.7	21.7	24.5
	cfm	0.9	1.9	2.5	3.1	3.8	5.6	6.8	8.9	11.0	12.8	14.4

m³ reference standard = 20°C, 1013 millibar(a), 0% relative water vapour pressure.

Technical Data

Ambient temperature range	5 - 50°C
Nitrogen outlet pressure	up to 11 bar g
Air inlet pressure	6 to 13 bar g
Air Inlet Quality	Pressure Dewpoint
	-40°C
	Particulate
	<0.1 micron
	Oil
	<0.01 mg/m ³
Supply Voltage Range	103 - 126V 60Hz 207 - 253V 50/60Hz
Inlet/outlet connections	G ¹ / ₂

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight (with compressor)	
	mm	in	mm	in	mm	in	kg	lb
MIDIGAS2 LAB	1034	41	450	18	471	19	98	216
MIDIGAS4 LAB	1034	41	450	18	640	26	145	320
MIDIGAS6 LAB	1034	41	450	18	809	33	196	432

MAXIGAS LAB

For multiple LC/MS and centralised laboratory supply applications



The Parker domnick hunter MAXIGAS LAB nitrogen gas generators employ robust, field proven technology to produce high purity nitrogen for a number of high flow, high demand analytical applications including multiple LC/MS. Flow rates range from 30 L/min to 2500 L/min, with purities from >95% to >99.999%.

The MAXIGAS LAB generators provide a continuous stream of high purity nitrogen from a innovative modular unit. Models are available with or without an external compressed air system, and offer a compelling alternative to other modes of supply such as cylinders or liquid.

Innovative design and technology facilitate maximum instrument uptime, attractive return on investment and proven analytical performance.



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Product Features:

- **Innovative modular system specifically for multiple LC/MS and centralised laboratory supply applications**
- **Produces a continuous stream of high purity analytical grade nitrogen 24 hours a day**
- **Integral automatic economy mode and continuous purity monitoring**
- **Digital and analogue outputs of remote monitoring and alarm capabilities**
- **Eliminate inconvenient and potentially dangerous nitrogen cylinders and dewars**
- **Robust, reliable with minimal operator attention and maintenance**

Product Selection

Performance data is based on 7 bar g (100 psi g) air inlet pressure and 20° - 25°C (66° - 77°F) ambient temperature. Consult Parker for performance under other specific conditions.

Nitrogen flow rate m³/hr vs Purity (Oxygen Content)													
Model	Unit	10ppm	50ppm	100ppm	250ppm	500ppm	0.1%	0.5%	1.0%	2.0%	3.0%	4.0%	5.0%
MAXIGAS104 LAB	m³/hr	2	3.8	5.5	7.1	8.6	9	14.1	17.8	22	25.8	29	32.2
	cfm	1.2	2.2	3.2	4.2	5	5.3	8.3	10.5	12.9	15.2	17.1	19.0
MAXIGAS106 LAB	m³/hr	3	5.7	8.3	10.7	13	13.4	21.2	26.6	32.8	38.7	43.5	48.3
	cfm	1.8	3.3	4.9	6.3	7.6	7.9	12.5	15.7	19.3	22.8	25.6	28.4
MAXIGAS108 LAB	m³/hr	4	7.6	11	14.3	17.3	18	28.3	35.5	43.8	51.6	58	64.4
	cfm	2.3	4.5	6.4	8.4	10.2	10.6	16.7	20.9	25.8	30.4	34.1	37.9
MAXIGAS110 LAB	m³/hr	5	9.5	13.8	17.8	21.6	22.4	35.3	44.4	54.7	64.5	72.5	80.4
	cfm	2.9	5.6	8.1	10.5	12.7	13.2	20.8	26.1	32.2	38.0	42.7	47.3
MAXIGAS112 LAB	m³/hr	6	11.3	16.5	21.4	25.9	26.8	42.4	53.3	65.7	77.4	87.1	96.5
	cfm	3.5	6.7	9.7	12.6	15.2	15.8	25	31.4	38.7	45.6	51.3	56.8
MAXIGAS116 LAB	m³/hr	7.9	14.4	20.9	27.1	32.8	34	53.7	67.5	83.2	98.1	110.3	122.3
	cfm	4.6	8.5	12.3	15.9	19.3	20.0	31.6	39.7	49	57.7	64.9	72.0
MAXIGAS120 LAB	m³/hr	9.8	17.4	25.3	32.8	39.7	41.2	65	81.7	100.7	118.7	133.5	148
	cfm	5.8	10.2	14.9	19.3	23.4	24.2	38.3	48.1	59.3	69.9	78.6	87.1

m³ reference standard = 20°C, 1013 millibar(a), 0% relative water vapour pressure.

Technical Data

Ambient temperature range	5 - 50°C
Nitrogen outlet pressure	up to 13 bar g
Air inlet pressure	6 to 15 bar g
Air Inlet Quality Pressure Dewpoint Particulate Oil	-40°C <0.1 micron <0.01 mg/m3
Supply Voltage Range	103 - 126V 60Hz 207 - 253V 50/60Hz
Air Inlet Quality Air Nitrogen	G1 G ¹ / ₂

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight	
	mm	in	mm	in	mm	in	kg	lb
MAXIGAS104 LAB	1894	76	550	22	692	28	336	741
MAXIGAS106 LAB	1894	76	550	22	861	34	394	869
MAXIGAS108 LAB	1894	76	550	22	1029	41	488	1076
MAXIGAS110 LAB	1894	76	550	22	1198	48	582	1283
MAXIGAS112 LAB	1894	76	550	22	1368	55	676	1490
MAXIGAS116 LAB	1894	76	550	22	1765	71	864	1905
MAXIGAS120 LAB	1894	76	550	22	2043	82	1052	2319

**Gas Generators for
Spectroscopy, TOC,
Circular Dichroism,
Digital Radiography
and evaporation**

Nitrogen Generators

Analytical and General Laboratory Applications



The Parker domnick hunter G3 and G4 nitrogen gas generators employ robust, field proven technology to produce ultra high purity nitrogen for life science, chemical analysis and spectroscopy applications. Flow rates range from 4 L/min to 14 L/min, with purities from >98% to >99.99%.

The G3 and G4 generators provide a continuous stream of ultra high purity nitrogen from a single 'plug & play' unit. Models are available with and without an integral oil free compressor, are extremely quiet in operation and are fully approved for use by major instrumentation manufacturers.

Innovative design and technology facilitate maximum instrument uptime, attractive return on investment and proven analytical performance, eliminating the need for other modes of supply.



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Product Features:

- **Complete 'Plug and Play' system for laboratory applications**
- **Produces a continuous supply of nitrogen from 98 to 99.99% purity**
- **Integral oil free compressor, with noise reduction technology**
- **Eliminate inconvenient and potentially dangerous nitrogen cylinders**
- **Compact, reliable with minimal operator attention and maintenance**
- **Improve analysis and reproducibility with guaranteed high purity gas**

Product Selection

Model	Flow Rate		Purity*	Inlet Air @ 7 bar g (101.5 psi g)	Outlet Pressure		Integral Compressor
	L/min				bar g	psi g	
G3100	4.0		>99.9	22	5	72.5	NO
G3110	4.0		>99.9	n/a	5	72.5	YES
G3200	5.0		>99.5	22	5	72.5	NO
G3210	5.0		>99.5	n/a	5	72.5	YES
G3300	7.0		>99	22	5	72.5	NO
G3310	7.0		>99	n/a	5	72.5	YES
G4000	5.0		>99.99	22	5	72.5	NO
G4010	5.0		>99.99	n/a	5	72.5	YES
G4400	14.0		>98	40	5	72.5	NO
G4410	14.0		>98	n/a	5	72.5	YES
G4510	12.0		>99.5	n/a	7	101.5	YES

*Purity with respect to oxygen

Note: Add suffix 'E' for 207-253V 50/60Hz ie G3100-E
Add suffix 'W' for 103 -126V 60Hz ie G3100-W

Technical Data

Ambient Temperature Range	5 - 45°C 41 - 113°F
Inlet Air Quality †	Clean dry compressed air ISO8573-1:2001 Class 2.-.1
Supply Voltage Range	103 - 126V 60Hz 207 - 253V 50/60Hz
Port Connections	Outlet Inlet †
	1/4" Compression Fitting 1/4" Compression Fitting

†Non compressor models only

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight (with compressor)		Weight (without compressor)	
	mm	in	mm	in	mm	in	kg	lb	kg	lb
G3 range	874	34.4	345	13.6	663	26.1	84	185.2	71	156.5
G4 range	874	34.4	345	13.6	663	26.1	90	198.4	77	169.7

Preventative Maintenance

Preventative Maintenance Kit G3	Part Number	Change Frequency
Filter Kit - G3 option 0 (no compressor)	606272350	12 Months
Filter Kit - G3 option 1 (compressor)	606272352	12 Months
Compressor Kit 230V - G3 option 1	606272334	12 Months
Compressor Kit 120V - G3 option 1	606272335	12 Months

Preventative Maintenance Kit G4	Part Number	Change Frequency
Filter Kit - G4 option 0 (no compressor)	606272353	12 Months
FilterKit - G4 option 1 (compressor)	606272354	12 Months
Compressor Kit 230V - G4 option 1	606272334	12 Months
Compressor Kit 120V - G4 option 1	606272335	12 Months

Nitrogen Generators

for Circular Dichroism and ICP purge applications



The Parker domnick hunter CD10 nitrogen gas generator employs robust, field proven technology to meet the complete purge gas requirements of today's latest Circular Dichroism and ICP instrumentation.

The CD10 generator provides a continuous stream of ultra high purity nitrogen suitable for optic, source and plasma torch purge applications, maximising instrument uptime, productivity and enhancing spectroscopic resolution. The CD10 is extremely quiet in operation and fully approved for use by major instrumentation manufacturers.

Innovative design and technology facilitate maximum instrument uptime, attractive return on investment and proven analytical performance, eliminating the need for other modes of supply.



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Product Features:

- **Specifically designed for Circular Dichroism and ICP applications**
- **Produces a continuous supply of high purity 99.9965% nitrogen 24 hours a day**
- **Simple to install and operate**
- **Eliminate inconvenient and potentially dangerous nitrogen cylinders**
- **Compact, reliable with minimal operator attention and maintenance**
- **Phthalate-free componentry**

Product Selection

Model	Flow Rate	Purity*	Air Inlet @ 8.5 bar g (123.3 psi g)	Delivery Pressure		Integral Compressor
	L/min	%	L/min	bar g	psi g	
CD10-0	10	>99.9965	130	7	101.5	NO

*Purity with respect to oxygen

Note: Add suffix 'E' for 207-253V 50/60Hz ie CD10-0-E
Add suffix 'W' for 103 -126V 60Hz ieCD10-0-W

Technical Data

Ambient Temperature Range	5 - 40°C 41 - 104°F
Inlet Air Quality	Clean dry compressed air ISO8573-1:2001 Class 2.-.1
Supply Voltage Range	103 - 126V 60Hz 207 - 253V 50/60Hz
Port Connections	Outlet Inlet
	1/4" Compression Fitting 1/4" Compression Fitting

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight	
	mm	in	mm	in	mm	in	kg	lb
CD10-0	705	27.8	510	20.1	760	29.9	135	298

Preventative Maintenance

Preventative Maintenance Kit	Part Number	Change Frequency
Filter Kit	606272251	12 Months

Nitrogen Generators

for Edge Medical Devices



The Parker domnick hunter G1-LN-800 nitrogen gas generator employs robust, field proven technology to produce ultra high purity nitrogen for critical life science applications.

The G1-LN-800 generator provides a continuous stream of ultra high purity nitrogen from a single 'plug & play' unit. This system is available with an integral oil free compressor, and is extremely quiet in operation.

Innovative design and technology facilitate maximum instrument uptime, attractive return on investment and proven analytical performance, eliminating the need for other modes of supply.



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Product Features:

- **Complete 'Plug and Play' system specifically designed for Edge Medical**
- **Produces a continuous supply of high purity 99.999% nitrogen 24 hours a day**
- **Integral oil free compressor, with noise reduction technology**
- **Eliminate inconvenient and potentially dangerous nitrogen cylinders**
- **Compact, reliable with minimal operator attention and maintenance**
- **Phthalate-free componentry**

Product Selection

Model	Flow Rate	Purity*	Outlet Pressure		Integral Compressor
	ml/min	%	mbar g	psi g	
G1-LN-800	800	>99.999	17	0.25	YES

*Purity with respect to oxygen

Note: Add suffix 'E' for 207-253V 50/60Hz ie G1-LN-800-E
Add suffix 'W' for 103 -126V 60Hz ie G1-LN-800-W

Technical Data

Ambient Temperature Range	5 - 45°C 41 - 113°F
Supply Voltage Range	103 - 126V 60Hz 207 - 253V 50/60Hz
Port Connections Outlet	1/4" Compression Fitting

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight	
	mm	in	mm	in	mm	in	kg	lb
G1-LN-800	567	22.3	400	15.7	700	27.5	82	181

Preventative Maintenance

Preventative Maintenance Kit	Part Number	Change Frequency
Filter and Compressor Kit 230V	606272440	12 Months
Filter and Compressor Service Kit 120V	606272442	12 Months

Dry Air Generators

for spectroscopy applications



The Parker domnick hunter G8 and G9 dry air generators employ robust, field proven technology to produce high purity dry air suitable for spectroscopy applications.

The G8 and G9 generators provide a continuous stream of dry air from a single 'plug & play' unit, are extremely quiet in operation and are fully approved for use by major instrumentation manufacturers.

Innovative design and technology facilitate maximum instrument uptime, attractive return on investment and proven analytical performance, eliminating the need for other modes of supply.



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Product Features:

- Ideal for analytical instruments that require ultra dry air
- Eliminate inconvenient and potentially dangerous nitrogen cylinders
- Integral oil free compressor, with noise reduction technology
- Produces a continuous supply of clean dry air 24 hours a day
- Compact, reliable with minimal operator attention and maintenance
- Phthalate-free componentry

Product Selection

	Flow Rate	Purity	Delivery Pressure		Integral Compressor
	L/min	°C (dew point)	bar g	psi g	
G8010	3	-40	5	72.5	YES
G9010	6	-40	5	72.5	YES

Note: Add suffix 'E' for 207-253V 50/60Hz ie G8010-E
Add suffix 'W' for 103 -126V 60Hz ie G8010-W

Technical Data

Ambient Temperature Range	5 - 45°C 41 - 113°F
Supply Voltage Range	103 - 126V 60Hz 207 - 253V 50/60Hz
Port Connections Outlet	1/8" Compression Fitting

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight	
	mm	in	mm	in	mm	in	kg	lb
G8010	842	33.1	345	13.6	413	16.3	54	119
G9010	842	33.1	345	13.6	413	16.3	54	119

Preventative Maintenance

Preventative Maintenance Kit G8	Part Number	Change Frequency
Filter Kit - G8 option 1 (compressor)	606272351	12 Months
Compressor Kit 230V - G8 option 1	606272336	12 Months
Compressor Kit 120V - G8 option 1	606272337	12 Months

Preventative Maintenance Kit G9	Part Number	Change Frequency
Filter Kit - G9 option 1 (compressor)	606272351	12 Months
Compressor Kit 230V - G9 option 1	606272336	12 Months
Compressor Kit 120V - G9 option 1	606272337	12 Months