



PRODUCT CATALOGUE

Analytical Gas Systems

GSFE Division

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Gas Chromatography

The science of separation, gas chromatography is an important technique used for drug, arson, toxicology and other organic compound analysis. It is carried out in laboratories across a range of areas, including quality control, R&D, pharmaceuticals and forensics.

In order to obtain accurate and meaningful results, Parker understand that your gas management system has to deliver a consistent and high-purity gas stream - from your source to your instrumentation - without risk of introducing contaminants.



Installation Example

- Nitrogen
- Hydrogen
- Zero Air
- Compressed Air



Hydrogen Generators - H

For GC combustion detector applications



Technical Data

Ambient Temperature Range		5 - 40°C (41 - 104°F)
Water Supply Pressure*		0.1 bar g (1.45 psi g)
Water Supply Flow Rate*		1 L/min
Water Quality		Deionised. ASTM II, >1MΩ, <1µs, filtered to <100µm
Supply Voltage Range		90 - 264V 50/60Hz
Port Connections	Hydrogen Outlet Water Drain Water Fill*	½" Compression Fitting Quick Release Push in Fitting Quick Release Push in Fitting

*With optional AWF.

Product Selection

Model	Flow Rate		Purity*		Water Consumption (24/7, full flow)		Delivery Pressure		Optional Auto Water Fill (AWF) [†]
	ml/min	%	L/week	bar g	psi g				
20H-Fuel	160	>99.9995	1.25	0.3-6.89	5-100	Yes			
40H-Fuel	250	>99.9995	2	0.3-6.89	5-100	Yes			
60H-Fuel	500	>99.9995	4	0.3-6.89	5-100	Yes			

*With respect to oxygen.

[†]For auto water fill option add suffix AWF ie. 20H-AWF.

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight (Empty)		Weight (Full of Water)	
	mm	in	mm	in	mm	in	kg	lb	kg	lb
20H-Fuel	456	17.9	342	13.5	437	17.2	19	41.9	23	50.7
40H-Fuel	456	17.9	342	13.5	437	17.2	19	41.9	23	50.7
60H-Fuel	456	17.9	342	13.5	437	17.2	19	41.9	23	50.7

Preventative Maintenance

Kit Type	Part Number	Change Frequency	Kit Contents
Replacement desiccant cartridge	MKH2PEM-D	As required*	Desiccant cartridge, cartridge spanner.
6 Month service kit	MKH2PEM-6M	6 months	Deionizer cartridge, water filter, environmental filters (x3), filter replacement tool.
24 Month service kit	MKH2PEM-24M	24 months	Deionizer cartridge, water filter, float, water pump, desiccant cartridge, service toggle, environmental filters (x3).

*20H Continuous operation approx 6 to 7 months.

*40H Continuous operation approx 4 to 5 months.

*60H Continuous operation approx 2 to 3 months.

Optional Extras

Description	Part Number	Function
Remote Networking Module	H2-REMOTE-NET-DH 604971530	Allows cascading of two generators.
Remote Networking Expansion Module	H2-REMOTE-EXP-DH 6049711540	Required to cascade each additional generator.

Hydrogen Generators - HMD

For GC and GC/MS carrier gas applications



Technical Data

Ambient Temperature Range	5 - 40°C 41 - 104°F
Water Supply Pressure*	0.1 bar g 1.45 psi g
Water Supply Flow Rate*	1 L/min
Water Quality	Deionised. ASTM II, >1MΩ, <1µs, filtered to <100µm
Supply Voltage Range	90V - 264V 50/60Hz
Port Connections	Hydrogen Outlet Water Drain Water Fill*

*With optional AWF.

Product Selection

Model	Flow Rate		Purity*		Water Consumption (24/7, full flow)		Delivery Pressure		Optional Auto Water Fill (AWF) [†]
	ml/min	%	L/week	bar g	psi g				
20H-MD-Carrier	160	>99.9999	1.69	0.69-6.89	10-100				Yes
40H-MD-Carrier	250	>99.9999	2.41	0.69-6.89	10-100				Yes
60H-MD-Carrier	500	>99.9999	4.82	0.69-6.89	10-100				Yes
110H-MD-Carrier	1100	>99.9999	10.60	0.69-6.89	10-100				Standard

*With respect to oxygen.

[†]For auto water fill option add suffix AWF ie 20H-MD-AWF.

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight (Empty)		Weight (Full of Water)	
	mm	in	mm	in	mm	in	kg	lb	kg	lb
20H-MD-Carrier	456	17.9	342	13.5	470	18.5	20.5	45.2	25	55.1
40H-MD-Carrier	456	17.9	342	13.5	470	18.5	20.5	45.2	25	55.1
60H-MD-Carrier	456	17.9	342	13.5	470	18.5	20.5	45.2	25	55.1
110H-MD-Carrier	456	17.9	342	13.5	470	18.5	23.6	51.8	28	61.7

Preventative Maintenance

Kit Type	Part Number	Change Frequency	Kit Contents
6 Month service kit	M06.HMD.0001	6 months	Deioniser cartridge, 100 micron water filter, filter replacement tool.
24 Month service kit	M24.HMD.0001	24 months	Float, water pump, service dongle, ¼" Tygon® tube.
60 Month service kit	M60.HMD.0001	60 months	Dryer column assemblies (x2).

Optional Extras

Description	Part Number	Purpose
Remote Networking Module	H2-REMOTE-NET-DH 604971530	Allows cascading of two generators.
Remote Networking Expansion Module	H2-REMOTE-EXP-DH 6049711540	Required to cascade each additional generator.

Hydrogen Generators - ChromGas H2F

For GC fuel and ICP-MS collision gas applications



Technical Data

Ambient Temperature Range	5 - 40°C 41 - 104°F
Water Supply Pressure*	<4.1 bar g <60 psi g
Water Supply Flow Rate	1 L/min
Water Quality	Deionised. ASTM II, >1MΩ, <1µs, filtered to <100µm
Supply Voltage Range	90V - 264V 50/60Hz
Port Connections	Hydrogen Outlet Water Drain Water Fill*

*Required, optional AWF. Water bottle can be gravity fed by a suitable deionized water source.

Product Selection

Model	Flow Rate		Purity*		Water Consumption (24/7, full flow)		Delivery Pressure		Optional Auto Water Fill (AWF)†
	ml/min	%	L/week	bar g	psi g				
H2F-100WD	100	>99.9995	0.75	0.3-6.89	5-100				Yes
H2F-165WD	165	>99.9995	1.25	0.3-6.89	5-100				Yes
H2F-260WD	260	>99.9995	2	0.3-6.89	5-100				Yes
H2F-510WD	510	>99.9995	4	0.3-6.89	5-100				Yes

*With respect to oxygen.

†For auto water fill option add suffix AWF ie. H2F-100WD-AWF.

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight (Empty)		Weight (Full of Water)	
	mm	in	mm	in	mm	in	kg	lb	kg	lb
H2F-100WD	435	17.1	342	13.5	457	18	19	41.9	23	50.7
H2F-165WD	435	17.1	342	13.5	457	18	19	41.9	23	50.7
H2F-260WD	435	17.1	342	13.5	457	18	19	41.9	23	50.7
H2F-510WD	435	17.1	342	13.5	457	18	19	41.9	23	50.7

Preventative Maintenance

Kit Type	Part Number	Change Frequency	Kit Contents
Replacement desiccant cartridge	MKH2F-D	As required*	Desiccant cartridge, cartridge spanner.
6 Month service kit	MKH2F-6M	6 months	Deionizer cartridge, water filter, environmental filters (2x), filter replacement tool.
24 Month service kit	MKH2F-24M	24 months	Deionizer cartridge, water filter, environmental filters (2x), filter replacement tool, float, water pump, desiccant cartridge, cartridge spanner, service reset dongle, ¼" Tygon® tube.

*H2F-100 & H2F-165 - Continuous operation approx 6 to 7 months.

*H2F-260 - Continuous operation approx 4 to 5 months.

*H2F-510 - Continuous operation approx 2 to 3 months.

Optional Extras

Description	Part Number	Purpose
Remote Networking Module	604970903	Remote Monitoring, Remote Alarm, Remote Control.

Ultra High Purity Nitrogen Generators

For GC and other critical analytical applications



Technical Data

Ambient Temperature Range		15 - 25°C (59 - 77°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 UHPN2 750 Outlet UHPN2 3000	$\frac{1}{4}$ " Compression Fitting $\frac{1}{8}$ " Compression Fitting $\frac{1}{4}$ " Compression Fitting

*Non compressor models only.

Product Selection

Model	Flow Rate		Purity*	Inlet Air 8 to 9.9 bar (116 to 143 psi)		Oulet Pressure		Integral Compressor
	L/min	%	L/min	bar g	psi g			
UHPN2-750C[†]	0.75	>99.9995	n/a	5	72.5	Yes		
UHPN2-3000C[†]	3.0	>99.9995	n/a	5	72.5	Yes		

*Purity with respect to oxygen.

[†]Add suffix 'E' for 207-253V 50/60Hz ie. UHPN2-750C-E.

[†]Add suffix 'W' for 103 -126V 60Hz ie. UHPN2-750C-W.

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
UHPN2-750, 750C	869	34.2	345	13.6	417	16.4	50	110	44	97
UHPN2-3000, 3000C	869	34.2	345	13.6	667	667	93	205	84	185

Preventative Maintenance

Model	Kit Type	Part Number	Change Frequency
UHPN2-750, 750C	Filter kit - Non compressor models	606272551	12 Months
	Filter kit - Compressor models	606272553	12 Months
	Compressor kit 230V	606272577	8,000 hours or 24 months (whichever comes first).
	Compressor kit 120V	606272579	8,000 hours or 24 months (whichever comes first).
UHPN2-1500, 3000, 3000C	Kit Type	Part Number	Change Frequency
	Filter kit - Non compressor option	606272551	12 Months
	Filter kit - Compressor option	606272555	12 Months
	Compressor kit 230V	606272581	8,000 hours or 24 months (whichever comes first).
	Compressor kit 120V	606272583	8,000 hours or 24 months (whichever comes first).

Optional Extras

Description	Part Number	Models
Installation kit	IK7694	Suitable for all UHP nitrogen generators.

High Purity Nitrogen and Dry Air Generators

Analytical instrumentation



Technical Data

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

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

*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.

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

Preventative Maintenance

Model	Kit Type	Part Number	Change Frequency
G6010	Filter kit	606272351	12 Months
	Compressor kit 230V	606272336	12 Months
	Compressor kit 120V	606272337	12 Months

Optional Extras

Description	Part Number	Models
Installation kit	IK7694	Suitable for all HP nitrogen/dry air generators.

High Purity Nitrogen Generators

For analytical instruments including ICP



Technical Data

Ambient Temperature Range		15 - 25°C (55 - 77°F)
Inlet Air Quality*		Clean dry compressed air ISO 8573-1:2001 Class 2.-.1
Supply Voltage Range		103 - 126V 60Hz 207 - 253V 50/60Hz
Port Connections	Inlet* Outlet	1/4" Compression Fitting 1/4" Compression Fitting

*Non compressor models only.

Product Selection

Model	Flow Rate		Purity*		Inlet air @ 8 to 9.9 bar (116 to 143 psi)**		Oulet Pressure		Integral Compressor
	L/min		%		L/min		bar g	psi g	
HPN2-5000[†]	5		>99.999		110		5	72.5	No
HPN2-5000C[†]	5		>99.999		n/a		5	72.5	Yes
HPN2-12500[†]	12.5		>99.5%		129		5	72.5	No
HPN2-12500C[†]	12.5		>99.5%		n/a		5	72.5	Yes

*Purity with respect to oxygen.

**Model HPN2-12500 min inlet 9 bar (130 psi).

[†]Add suffix 'E' for 207-253V 50/60Hz ie. HPN2-7000-E.

[†]Add suffix 'W' for 103 -126V 60Hz ie. HPN2-7000-W.

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
All HPN2	869	34.2	345	13.6	667	26.3	95	189.6	86	209.4

Preventative Maintenance

Model	Kit Type	Part Number	Change Frequency
All HPN2	Filter kit - Non compressor models	606272557	12 Months
	Filter kit - Compressor models	606272559	12 Months
	Compressor kit 230V	606272581	8,000 hours or 24 months (which ever comes first).

Optional Extras

Description	Part Number	Models
Installation kit	IK7694	Suitable for all HPN2 nitrogen generators.

Ultra High Purity Zero Nitrogen Generators

For GC makeup gas and carrier gas applications

Technical Data

Ambient Temperature Range		15 - 25°C (59 - 77°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.

Product Selection

Model	Flow Rate	Purity*			Inlet Air @ 9 to 9.9 bar (131 to 143 psi)	Delivery Pressure		Integral Compressor
		L/min	ppm organic impurity	%		L/min	bar g	
UHPZN2-1000	1	<0.1 Total Hydrocarbons	>99.9995%	n/a	n/a	5	72.5	No
UHPZN2-3000	3	<0.1 Total Hydrocarbons	>99.9995%	n/a	n/a	5	72.5	No
UHPZN2-1000C	1	<0.1 Total Hydrocarbons	>99.9995%	n/a	n/a	5	72.5	Yes
UHPZN2-3000C	3	<0.1 Total Hydrocarbons	>99.9995%	n/a	n/a	5	72.5	Yes

*Purity with respect to oxygen.

†Add suffix 'E' for 207-253V 50/60Hz ie. UHPZN2-1000-E.

†Add suffix 'W' for 103 -126V 60Hz ie. UHPZN2-1000-W.

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
UHPZN2 range	869	34.2	345	13.6	667	26.3	96	211.6	86	189.5

Preventative Maintenance

Model	Kit Type	Part Number	Change Frequency
All UHPZN2	Filter kit - Non compressor models	606272561	12 Months
	Filter kit - Compressor models	606272563	12 Months
	Compressor kit 230V	606272581	8,000 hours or 24 months (which ever comes first).

Optional Extras

Description	Part Number	Models
Installation kit	IK7694	Suitable for all UHP ZN2 zero nitrogen generators.



Zero Air Generators

For GC combustion detector applications

Technical Data

Ambient Temperature Range			5 - 40°C (41 - 104°F)
Inlet Air Quality			Clean dry compressed air ISO8573-1:2001 Class 3.2.1
Supply Voltage Range			103 - 126V 60Hz 207 - 253V 50/60Hz
Port Connections	UHP-10/35ZA-S	Outlet Inlet	1/8" Compression Fitting 1/8" Compression Fitting
	UHP-50/75/300ZA-S	Outlet Inlet	1/4" Compression Fitting 1/4" Compression Fitting



Product Selection

Model	Flow Rate		Organic Impurity	Air Inlet @ 4 -10 bar g (58-145 psi g)		Delivery Pressure		Integral Compressor
	L/min		ppm	L/min		bar g	psi g	
UHP-10ZA-S[†]	1		<0.1	1.2		4-10	58-145	No
UHP-35ZA-S[†]	3.5		<0.1	4.2		4-10	58-145	No
UHP-50ZA-S[†]	5.0		<0.1	6.0		4-10	58-145	No
UHP-75ZA-S[†]	7.5		<0.1	9.0		4-10	58-145	No
UHP-300ZA-S[†]	30		<0.1	35		4-10	58-145	No

[†]Add suffix 'E' for 207-253V 50/60Hz ie. UHP-10ZA-S-E.

[†]Add suffix 'W' for 103-126V 60Hz ie. UHP-10ZA-S-W.

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight	
	mm	in	mm	in	mm	in	kg	lb
UHP-10ZA-S	325	12.8	340	13.4	425	16.7	10.2	22.5
UHP-35ZA-S	455	17.9	340	13.4	425	16.7	14.2	31.3
UHP-50ZA-S	455	17.9	340	13.4	425	16.7	14.2	31.3
UHP-75ZA-S	455	17.9	340	13.4	425	16.7	14.2	31.3
UHP-300ZA-S	455	17.9	340	13.4	425	16.7	15.2	33.5

Preventative Maintenance

Model	Kit Type	Part Number	Change Frequency
UHP-ZA (Up to S/N 22Z0138)	Inlet filter kit	005A0	12 Months
	Outlet filter kit	005AA	12 Months
UHP-ZA (From S/N 22Z0139)	Inlet filter kit	P010A0	12 Months
	Outlet filter kit	P010AA	12 Months
All UHP-ZA	Fan kit, 230V	606272525	24 Months
	Fan kit, 120V	606272526	24 Months

Optional Extras

Description	Part Number	Models
Installation kit	IK76803	Suitable for all zero air generators.

ChromGas ZAG

Zero Air Generators for Gas Chromatography



Technical Data

Ambient Temperature Range	16 - 38°C (60 - 100°F)
Inlet Air Quality	Clean dry compressed air ISO8573-1:2001 Class 3.2.1
Supply Voltage Range	220V 50Hz
Port Connections	1/4" NT (female)

Product Selection

Model	Flow Rate	Organic Impurity	Air Inlet @ 40-125 psi g (2.8-8.6 bar g)	Delivery Pressure		Integral Compressor
	L/min	ppm	L/min	bar g	psi g	
ZAG-3.5LWD	3.5	<0.05	3.5	2.8-8.6	40-125	No
ZAG-7LWD	7	<0.05	7.0	2.8-8.6	40-125	No
ZAG-18LWD	18	<0.05	18.0	2.8-8.6	40-125	No
ZAG-30LWD	30	<0.1	30	2.8-8.6	40-125	No

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight	
	mm	in	mm	in	mm	in	kg	lb
ZAG-3.5LWD	437	17.2	343	13.5	407	16	14.2	31.3
ZAG-7LWD	437	17.2	343	13.5	407	16	14.2	31.3
ZAG-18LWD	437	17.2	343	13.5	407	16	14.2	31.3
ZAG-30LWD	437	17.2	343	13.5	407	16	15.2	33.5

Preventative Maintenance

Model	Kit Type	Part Number	Change Frequency	Kit Contents
All ZAG Models	12 month service kit	MKZAG-12M	12 months	Replacement filter elements.
ZAG-3.5LWD	36 month service kit	MKZAG-3.5LWD-36M	36 months	Replacement filter elements, replacement catalyst module (220V).
ZAG-7LWD		MKZAG-7LWD-36M		
ZAG-18LWD		MKZAG-18LWD-36M		
ZAG-30LWD		MKZAG-30LWD-36M		

Optional Extras

Description	Part Number	Models
Installation kit	IK76803	Suitable for all zero air generators.

Liquid Chromatography Mass Spectrometry

Liquid chromatography mass spectrometry (LC/MS) is used in a range of scientific sectors in applications including drug development, environmental analysis and drug discovery. But LC/MS systems require a consistent, high purity supply of inert or unreactive gas to effectively separate liquid mixtures and accurately identify the components by their mass – tasks that can be complicated by traditional means of supply.



Installation Example

■ Nitrogen



Nitrogen Generators

For LC/MS applications -
with optional economy mode



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

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	
LCMS20-0†	20	>99		70	7	101.5	No
LCMS20-1†	20	>99		n/a	7	101.5	Yes
LCMS30-0†	30	>99		130	7	101.5	No
LCMS30-1†	30	>99		n/a	7	101.5	Yes

*Purity with respect to oxygen.

†Add suffix 'E' for 207-253V 50/60Hz ie LCMS20-0-E.

†Add suffix 'W' for 103-126V 60Hz ie LCMS20-0-W.

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.	LCMS20-50 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	
	mm	in	mm	in	mm	in	kg	lb
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*
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†

*With compressor

†Without compressor

Preventative Maintenance

Kit Type	Part Number	Change Frequency
Filter Kit - all models	606272251	12 months
Compressor Kit 230V - Option 1 models	606272253	8,000 hours or 24 months (whichever comes first).
Compressor Kit 120V - Option 1 models	606272261	8,000 hours or 24 months (whichever comes first).

Optional Extras

Description	Part Number	Required for
Installation kit	IK7572	Suitable for all LCMS nitrogen generators.

NitroFlow Lab

Nitrogen Generators

For LC/MS applications



Technical Data

Ambient Temperature Range	10 - 35°C (50 - 95°F)		
Supply Voltage Range	230V 50/60Hz		
Port Connections	Inlet	N/A	Outlet G ^{1/4} (optional 6 and 8 mm push fit connectors included)

Product Selection

Model	Part Number	Flow Rate	Purity*	Delivery Pressure		Integral Compressor
		L/min	%	bar g	psi g	
NitroFlow Lab	159.003848	32	Up to 99.5 %	8	116	Yes

*Purity with respect to oxygen and is based on flow. Higher flow results in lower purity.

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight	
	mm	in	mm	in	mm	in	kg	lb
NitroFlow Lab	700	28	310	12	900	35	93	205

Preventative Maintenance

Kit Type	Part Number	Change Frequency
Carbon adsorber	159.003754	8,000 hours
Oxygen sensor	159.005574	36 Months
Air compressor 230V/50Hz	606262350	8,000 hours or 24 months (whichever comes first).
Nitrogen compressor LP/HP 230V/50Hz	606262352	8,000 hours or 24 months (whichever comes first).



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



Nitrogen Gas Generators

Overcoming problems with typical nitrogen supply methods

Obtaining a continuous and secure supply of nitrogen gas can be troublesome and expensive. Typical supply methods include high pressure cylinders, liquid mini tanks or bulk storage vessels, however, each of these options introduces a range of problems that need to be solved.



Typical supply methods such as high pressure cylinders, liquid mini tanks or bulk storage vessels present considerable logistical issues. Furthermore, the costs can

be relentless, arising from the price of gas itself, its transportation, cylinder or tank rental, and the resources required to manage the replenishment process.



The cost of lost production due to running out of gas, late deliveries and logistics / administration problems can cause concern.

Wasted money due to loss of gas from liquid 'boil off' or gas returned unused in cylinders is another significant issue.

Health and safety regulations also surround the movement and storage of heavy high pressure cylinders and managing the large volumes of extremely cold (-196°C), skin damaging liquid, that can also rapidly produce thousands of cubic metres of asphyxiant gas, is another major consideration.



Nitrogen constantly surrounds us, forming approximately 78% of the air we breathe at sea level.

The problem is that air also contains approximately 21% oxygen, an essential gas for sustaining life, but a major contributor to the unwanted oxidation of products, degradation of food stuffs and sustaining fire or explosion risk for flammable or reactive products.

Other contaminants such as moisture and dirt particulate also need to be considered.

If these unwanted components of ambient air could be removed at point of use, then an abundant feed stock of nitrogen gas would be available to any user, produced at their premises, adjacent to their application, on demand and without the need to rely on expensive gas cylinders or liquid nitrogen.

Modular nitrogen gas generators – A dedicated solution for every application

The ideal solution lies in a range of proven gas generation systems from Parker domnick hunter, which enable users to produce their total demand for nitrogen gas on their premises, under their complete control. As a result, companies can generate as much or as little nitrogen as needed at the required purity and, at a fraction of the cost of having gas delivered by an external supplier.

Membrane Gas Generators



NitroSource



NitroFlow HP

Benefits:

Correct purity always

Provides the right purity for the application. This ensures lowest energy consumption and maximum savings on unit gas cost.

Energy efficient

Gas on demand with automatic stand-by mode (using zero compressed air) ensures lowest operating costs.

Multi bank cascading to reduce energy with varying demand applications – provides flexibility and lowest operating costs.

Compressed air pre-treatment

A dedicated pre-treatment package means the system can operate from any compressed air source, safely and securely ensuring maximum service life with lowest cost of ownership.

Smaller, more compact and lightweight

Modular construction means less than half the size of conventional designs providing lowest cost installation and saving on valuable floor space.

Modular design

100% stand-by at a fraction of the cost.

10 year guarantee on pressure envelope (PSA).

Constant nitrogen quality due to snow storm filling (PSA).

Easy add on sub units (membrane).

Controller / receptor configuration (membrane).

Easy and flexible Installation

Fits through standard doorway (no need for structural work). Minimum footprint.

Reliable and easy to maintain

Very few consumable components. In multibank installations, individual modules can be isolated for maintenance without disruption to production - Reducing downtime and providing lowest cost of ownership.

Industry Compliant

GOST-R, PED, CE, UL, CRN, FDA Article 21*, CRN (MAXIGAS), EIGA Food & Pharmaceutical *.

*Independently tested by accredited UKAS laboratory.

PSA Gas Generators



MIDIGAS



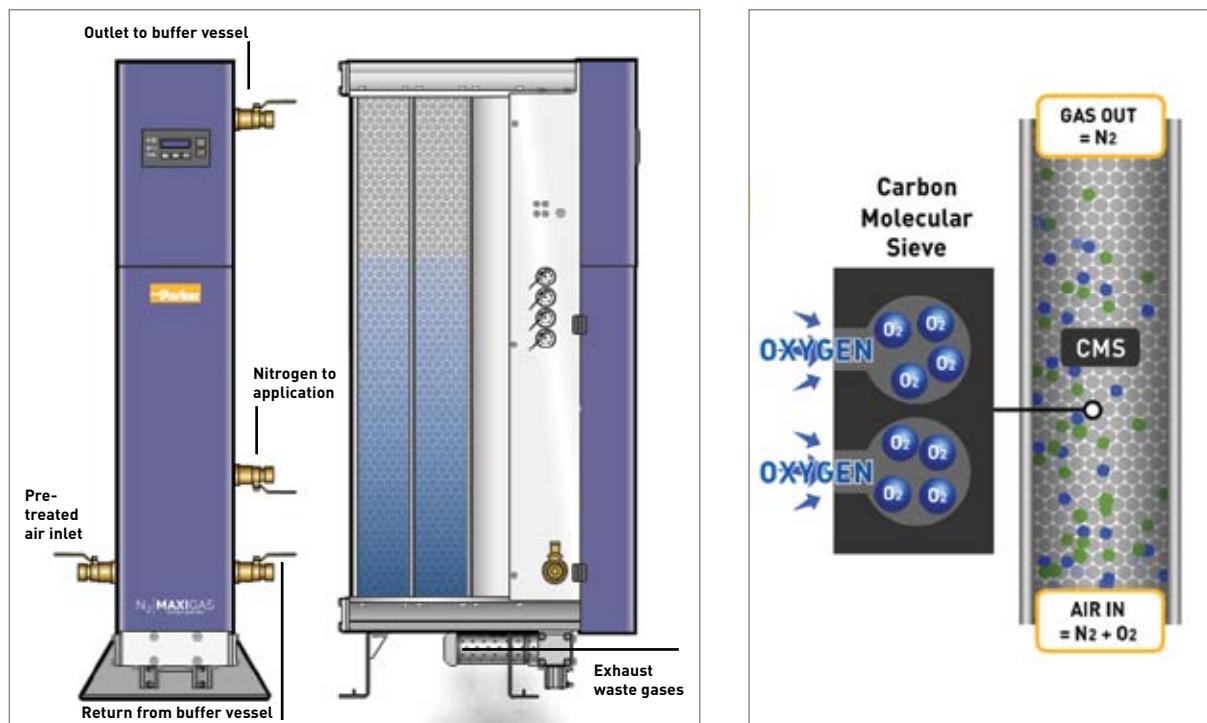
MAXIGAS



Multi-banked installation

PSA nitrogen generators - How they work

MAXIGAS and MIDIGAS nitrogen generators comprise of high tensile aluminium columns, each containing twin chambers of Carbon Molecular Sieve, (CMS), a material which removes oxygen and trace gases from compressed air by molecular adsorption, allowing nitrogen to pass through as the product gas.



Clean dry compressed air from a Parker domnick hunter pre-treatment package enters the lower inlet manifold and into the operational set of chambers. As the air passes over the CMS, oxygen is preferentially adsorbed into the CMS pores leaving an outlet stream of nitrogen gas. This nitrogen gas passes into the top outlet manifold, then into a process buffer vessel and finally through the generator control system to regulate pressure, flow and monitor purity before being released to the application. The CMS in the opposite set of chambers has previously adsorbed oxygen and by releasing the pressure

rapidly to atmosphere, oxygen is removed from the CMS and the cycle is ready to begin again. This cycle operates on a continuous basis, ensuring a constant stream of nitrogen gas, 24/7 if required. The modular aluminium design eliminates the need for complex valves and interconnecting piping as used in conventional designs. CMS is not considered to be a regular replacement component and is expected to have a minimum service life of at least 10 years, subject to correct operation and maintenance.

PSA nitrogen generation systems MAXIGAS and MIDIGAS

A robust and reliable design is your guarantee of performance. With the proven benefits of advanced aluminium forming technology, Parker domnick hunter has developed a range of nitrogen gas generators that are typically 60% of the size and weight of conventional designs.

These advanced nitrogen gas generators provide one of the most simple and reliable solutions available.

Engineers at Parker domnick hunter have developed MAXIGAS and MIDIGAS using innovative aluminium forming technology which has been proven over many years with the world famous PNEUDRI compressed air dryer ranges. This expertise has produced a nitrogen generation system which is extremely compact and does not require any special foundations or plant structural work.

The pressure envelope has been Lloyds tested and approved for a minimum of 10 years continuous cyclic operation.

Unlike welded carbon steel nitrogen generators, the length to diameter ratio of the internal voids and non-welded construction, means that MAXIGAS and MIDIGAS do not require periodic inspections for insurance purposes. This further enhances the ability to provide maximum uptime with minimum disruption to your production.

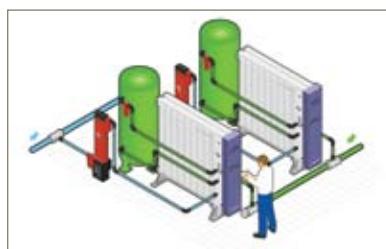


CMS Adsorption Columns



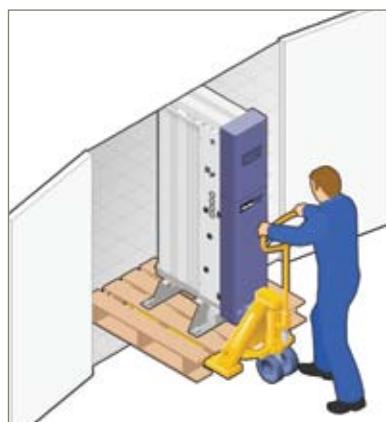
Distribution manifold

Greater flexibility with multi-banking



Multi-banking

Unlike traditional designs, MAXIGAS models can be multi-banked to provide extra nitrogen capacity should demand increase in the future. There is no need to replace the generator with a larger unit. Additional capacity can be facilitated by simply adding extra bank(s).



Flexibility during maintenance

Multi-banking allows individual generator banks to be easily isolated for routine service work, whilst maintaining the nitrogen supply.

100% stand-by

Compared to conventional designs, 100% standby is available at a fraction of the cost as only one extra gas generator bank is required.

Fits through a standard doorway

MAXIGAS will fit through a standard doorway, eliminating the need for special access or facility structural dismantling during installation.

MAXIGAS and MIDIGAS – Five key features to guarantee nitrogen quality

1 PNEUDRI pre-treatment package

All PSA nitrogen generators must have the correct air inlet quality to ensure stable operation and a long service life. Although refrigerant dried air is acceptable for lower purity applications, we believe that protecting your investment and ensuring trouble-free operation is important. Quite simply, in Parker domnick hunter's long experience of manufacturing and installing PSA nitrogen generators, a PNEUDRI desiccant dryer will provide better protection to the CMS, typically extending the service life to 10 years and beyond.

This means that MAXIGAS and MIDIGAS generators can operate from virtually any compressed air supply.

In addition, the pre-treatment package is controlled by the nitrogen generators, so that when it enters economy stand-by mode, the dryer also switches into economy stand-by mode. This consumes zero compressed air to save energy and significantly reduces running costs.

Good quality compressed air = good quality nitrogen



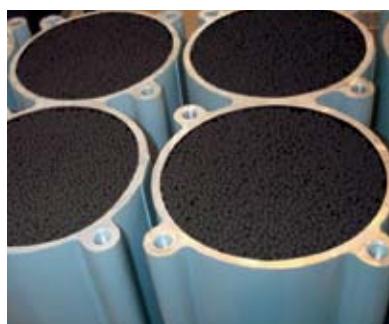
2 Specially selected CMS materials provide:

- Optimum gas productivity and regeneration to ensure consistent purity.
- High crush strength to prevent attrition and breakdown of the CMS.
- Low air to nitrogen ratios to reduce air consumption.
- Wide purity range for customer flexibility.

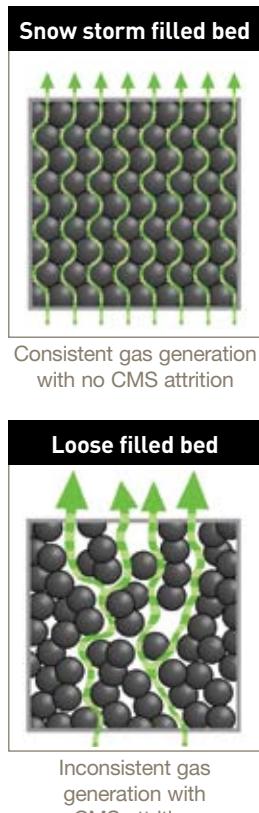


3 Modular aluminium design

Modular aluminium construction is used throughout for the CMS chambers and distribution manifolds. This innovative design allows the CMS material to be 'snowstorm filled' and then retained by spring loading to provide absolute maximum packing density. This prevents bed movement during transportation and operation to eliminate attrition, breakdown and leakage paths which could lead to premature failure or loss of nitrogen purity.



4 'Snow storm' filling ensures consistent nitrogen purity



Parker domnick hunter PSA nitrogen generators utilises a technique known as 'snow storm filling' to charge the adsorption columns with CMS.

Benefits:

- Achieves maximum packing density for the CMS material, fully utilising all of the available space envelope.
- Less CMS required and prevents compressed air channelling through the CMS as experienced with most conventional designs. Due to channelling, conventional designs require more CMS to achieve an identical purity, increasing physical size, operational and maintenance costs.
- Prevents CMS attrition which can lead to dusting, blocked filters and silencers and catastrophic loss of nitrogen purity.
- Allows 100% of the available CMS material to be used for producing nitrogen, therefore reducing the amount of CMS required and overall lifetime costs.
- 100% of CMS is regenerated ensuring a very stable and consistent nitrogen purity.
- Provides a low, equal resistance to flow, allowing multiple CMS chambers and multiple generator banks to be used.

5 Nitrogen generator control system

The MAXIGAS and MIDIGAS ranges of nitrogen gas generators have a comprehensive integral control system fitted as standard with the following benefits:

Integral oxygen analyser – This ensures that the nitrogen purity is constantly maintained and gives an instant visual confirmation of the output gas quality. 4-20mA outputs facilitate remote monitoring if required and the possibility to data log for complete traceability.

Mass flow controller – The mass flow controller stops the generator being overflowed and ensures the required purity and pressure are maintained regardless of downstream conditions. Consistently overflowing a nitrogen generator can cause irreversible damage to the CMS and affect its ability to recover gas purity.

Outlet pressure regulator – Controls nitrogen pressure to match system requirements and ensures that your process is protected against overpressure.

Economy control – During periods of 'no nitrogen' usage, the generator senses this and enters economy stand-by mode. As soon as nitrogen use is resumed again, the generator reverts to operational mode.

During economy stand-by, zero compressed air is consumed by the generator and the associated pre-treatment package. This results in reduced energy consumption and significant operating cost reductions.



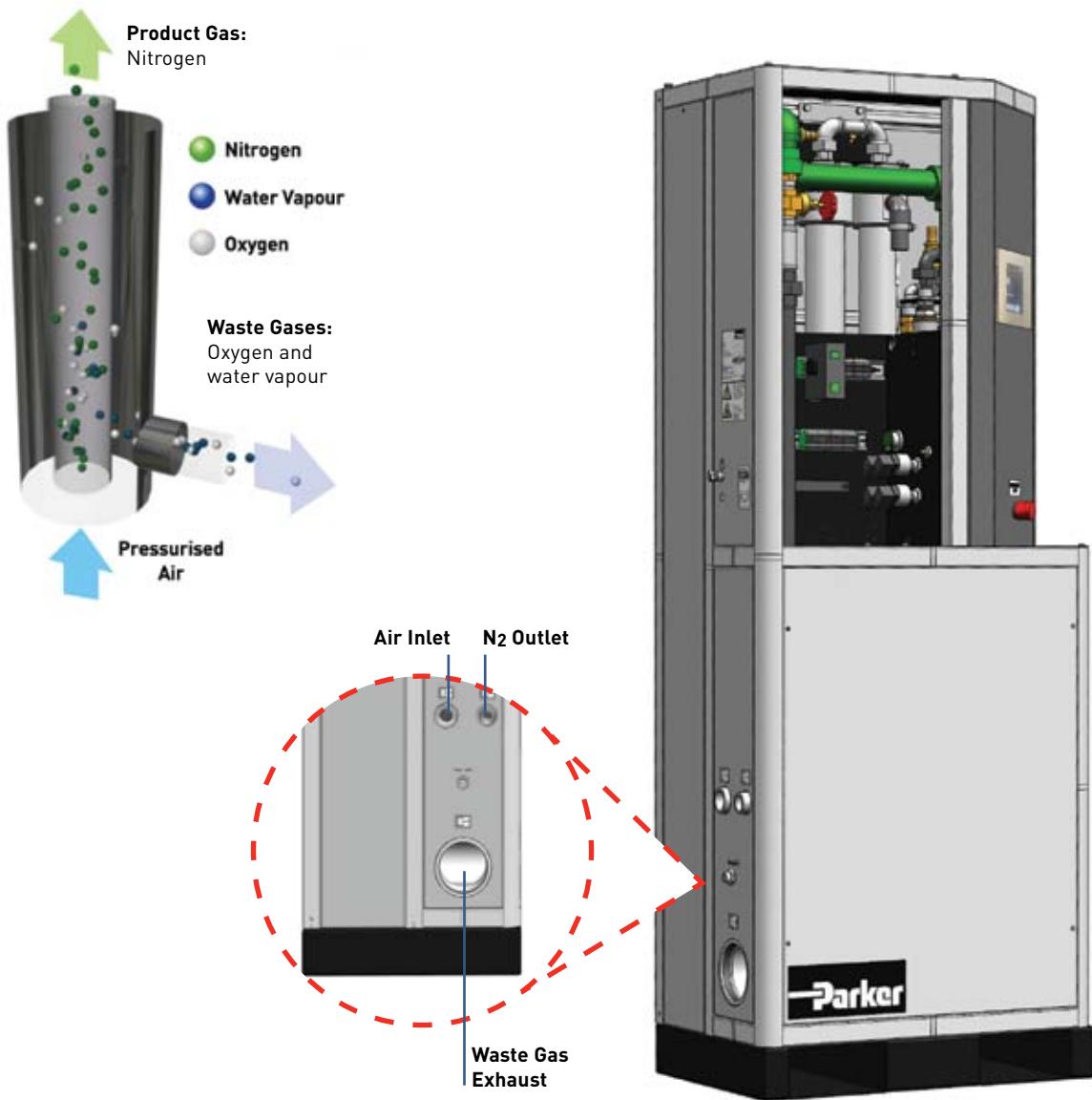
Membrane nitrogen generators

How they work

NitroSource and NitroFlow nitrogen generators consist of hollow-fibre membrane modules arranged in a convenient housing with a control system and integral filtration.

Dried compressed air (<+5°C pdp) enters the gas generator inlet port where it passes through 1 micron and 0.1 micron filtration, then through a carbon tower to remove oil odour, vapour and ozone, and finally through a dust filter before entering the membrane modules.

The membrane modules are designed to remove unwanted gases such as oxygen and water vapour through the hollow fibre wall and out to atmosphere, whilst retaining nitrogen as the product gas that is fed through to the application.



Membrane nitrogen generation systems

NitroSource and NitroFlow

The concept of gas separation by hollow-fibre membranes is simple. A small hollow tube allows unwanted gases such as oxygen and water vapour to permeate through its walls whilst nitrogen is retained for use as the product gas in the application.

In reality, molecular separation is slightly more complex. Parker domnick hunter's team of polymer scientists has refined and developed the advanced hollow-fibre technology to achieve extremely high levels of performance and stability.

Parker domnick hunter hollow-fibre membranes are produced from a very strong engineering polymer – Polyphenylene Oxide, (PPO). As well as being robust, the PPO is also very permeable. This means that fewer fibres are needed for a given volume of nitrogen production and a much lower inlet air pressure is required for gas production to take place. In fact Parker domnick hunter membranes are the most permeable produced anywhere in the world.



Parker domnick hunter generators require fewer membranes	Parker domnick hunter membranes require lower compressed air pressure	Parker domnick hunter membrane fibres are very robust
Compact design Less weight	Generators are designed for lower inlet air pressure	Less sensitive to contamination
Smaller generators saving space	Smaller compressor required	Longer fibre life
Lower investment in membrane modules	No heater required to facilitate permeation	Less maintenance
Less cost	Less noise and heat produced	Less cost
	Lower energy consumption Energy saving	

Membrane technology uses bundles of hollow-fibres contained within a tube. The walls of these special fibres selectively separate compressed air by diffusing oxygen and other waste gases to atmosphere whilst retaining nitrogen and allowing it to pass through the centre of the fibres to the application.

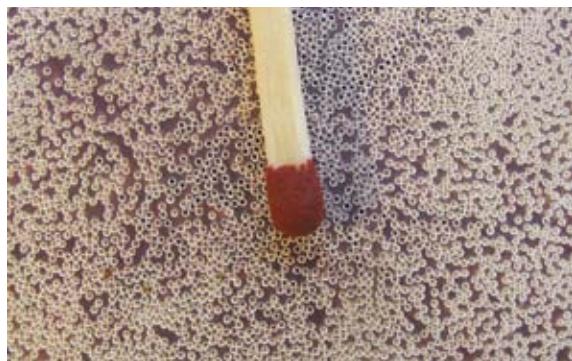
Parker domnick hunter = Low cost of ownership

NitroSource and NitroFlow – Four key features to guarantee nitrogen quality



1 Integral compressed air filtration

NitroSource and NitroFlow nitrogen generators have integral filtration to purify the incoming compressed air. Unlike PSA technology, Parker domnick hunter membrane fibres are less susceptible to water vapour, so refrigeration drying is acceptable as a pre-treatment package.



PPO Fibres 0.5mm diameter

2 Parker domnick hunter PPO fibres

Parker domnick hunter manufactures and controls its own gas separation hollow-fibre membranes and module production. This means that every nitrogen generator produced using these modules is matched and tested to achieve the required flow and purity with a tolerance of -0% +10%. Therefore, the nitrogen generator will always perform in accordance with or better than specification.

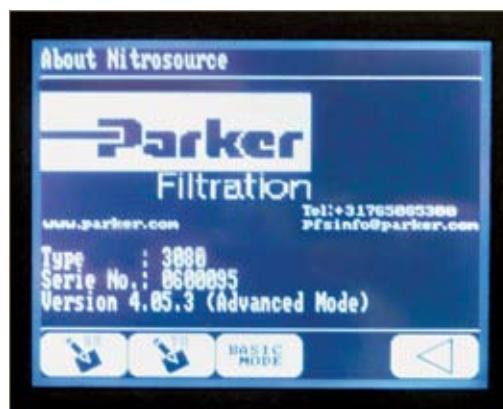
Packed fibres have a larger diameter of 0.5mm. This means they are unlikely to block and will have a very long service life.



Pre-aging of membranes

3 Membrane fibres pre-aged

Parker domnick hunter PPO membrane fibres are pre-aged immediately after production for five weeks. When polymer membranes are manufactured, the molecular structure takes time to 'settle' into its final state. Unlike competing membranes that can take over a year to 'settle', the Parker domnick hunter fibre only takes five weeks. This means that when the modules are built into a Parker domnick hunter generator the performance is fixed for the life of the unit and will not deteriorate or consume more compressed air.



NitroSource touch screen controller

4 Nitrogen generator control system

The integral control system with an oxygen analyser ensures that the output nitrogen gas is always at the right quality.

Economy control prevents air consumption when no gas is required and an outlet pressure regulator ensures that the downstream process is protected against over pressurisation.

What nitrogen quality do I need?

The majority of applications that use nitrogen gas do not need the 10ppm (99.999%) purity supplied by the traditional gas companies as bulk liquid or gas (cylinders). Providing customers with ultra-high purity nitrogen in all instances is an unnecessary waste of money and energy.

What do we mean by 'purity'?

By purity Parker domnick hunter means the maximum remaining oxygen content in the output nitrogen gas. Parker domnick hunter nitrogen technology when combined with Parker domnick hunter compressed air

pre-treatment, guarantees the nitrogen gas to be commercially sterile, oil free, dry and particulate free. (Within the specifications defined in the product information data contained in this brochure.)

The maximum remaining oxygen content required will vary with every application.

Maximum cost and energy savings = maximum oxygen level permissible



High Purity

**10 ppm to 1000ppm
(99.999% to 99.9%)**

Laser cutting

50ppm to 500ppm

Heat Treatment

10ppm to 1000ppm

Electronics Soldering

50ppm to 500ppm

Pharmaceutical

10ppm to 5000ppm

Mid Purity

0.1% to 1% (99.9% to 99%)

Food MAP

0.1% to 1%

Food processing

0.1% to 1%

Beer dispense

0.5%

Wine blanketing

0.5%

Oil sparging

0.5%

Brazing

0.5%

Injection molding

0.5% to 1%

Wire annealing

0.5%

Aluminium sparging

0.5%

Low Purity

1% to 5% (99% to 95%)

Fire prevention

5%

Explosion prevention

2% to 5%

Pressure testing

5%

Gas seal blanketing

5%

Pigging

5%

Chemical blanketing

1% to 5%

Autoclaves

5%

Laser Sintering

2%

Dry boxes

2%

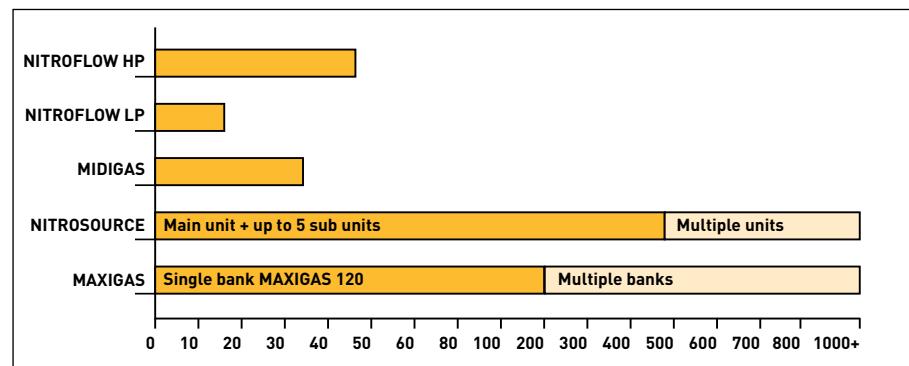
What nitrogen generator do I require?

Parker PSA and membrane technologies each offer unique benefits and value. There are many factors which affect the ultimate choice of generator, not just pressure, flow and purity. Ease of installation, footprint, location, application, and personal preferences are only a few of the other considerations.

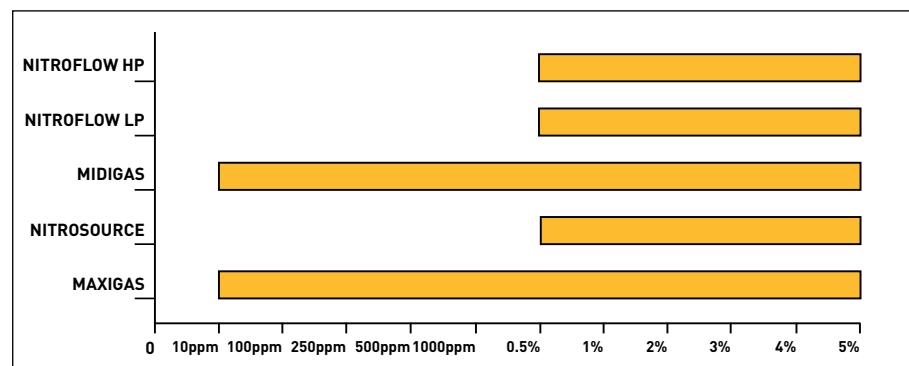
In general, membrane technology is better suited to low purity applications and PSA technology to higher purity applications.

If required, your local Parker domnick hunter Sales Company or their authorised distributor can assist in the selection of a suitable solution for your application.

Nitrogen generator model vs flow m³/hr



Nitrogen generator model vs maximum remaining oxygen content



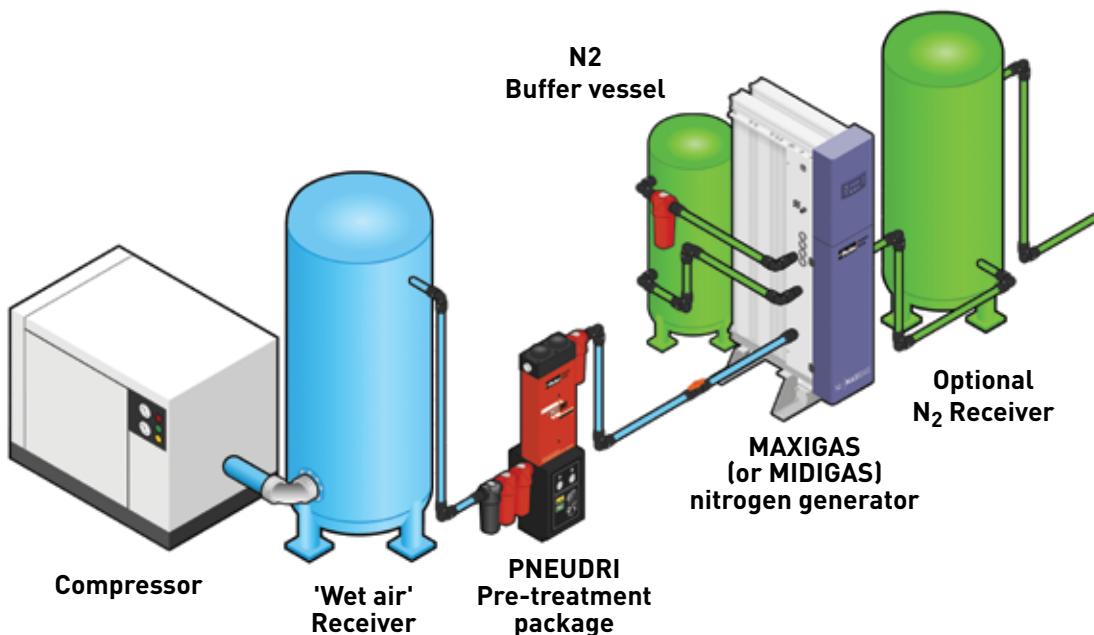
Membrane strengths

- Instant purity on start-up
- No storage for start-up
- No buffer vessels
- Refrigeration dryer; zero purge
- Easy expansion
- Low service costs
- Ideal 'plug and play' solution
- Simple installation
- Simple in-situ purity adjustment
- Operation to 40°C air inlet temperature
- Silent operation

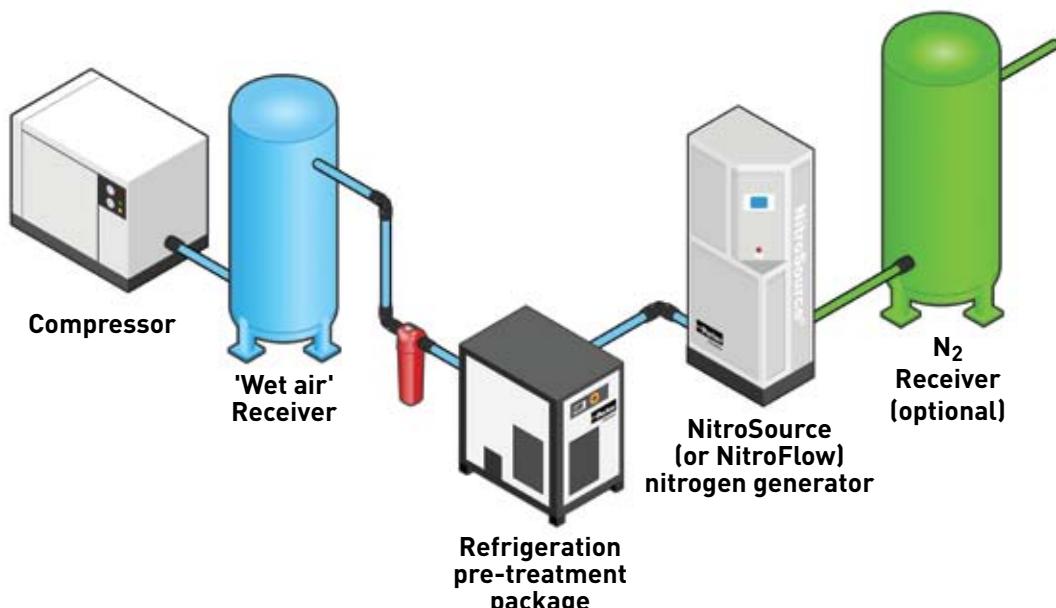
PSA strengths

- Easily achieves very high purity
- Stable flow, pressure and purity
- Long service life - 10 years +
- Low Air / N₂ ratios
- Expandable
- Multi bank - cascading
- Low service costs
- Ideal - high tech applications
- Operation to 50°C ambient
- Food grade approvals

Typical PSA installation



Typical membrane installation



Security of nitrogen supply and energy saving

The unique benefits of Parker PSA and membrane nitrogen gas generators offer users some really significant value when compared to conventional designs.

There are three major benefits to multi banking gas generators:

1 Stand-by or back up capability

With a conventional design, if 100% back-up is required, for example to allow for maintenance or a breakdown, then an additional unit of the same size would be needed, doubling the initial purchase and installation costs along with the maintenance requirements.

The MAXIGAS and NitroSource gas generators from Parker domnick hunter overcome this dilemma by facilitating the use of a back-up unit for a fraction of the cost.

For example in a four bank installation, the addition of just one extra bank would ensure 100% back-up for only 25% the cost of a traditional solution.

2 Variable demand and energy reduction

A traditional generator solution is relatively energy efficient when the gas usage is at or about maximum flow. However, with variable demand conditions, because of the fixed timing cycle of most PSA gas generators and the set permeation rate of membrane units, the compressed air consumption is practically the same whether running at 100% flow or 10% flow.

Using a multi-bank MAXIGAS or NitroFlow solution will enable the possibility of cascading, where the generator banks are set to cut in and out of economy stand-by depending on the system pressure. In economy stand-by, the generators consume only a few Watts of electrical energy and use zero compressed air. This results in massive energy and cost savings.

3 Expandability

Thanks to the modular concept of MAXIGAS and NitroSource, expanding your system to meet future increased demand for nitrogen gas has never been easier. Adding extra banks at a later date saves money now and gives you peace of mind that your system will be 'future proof' with a lower cost up-grade if your demand increases.



NitroSource main unit can easily be expanded with up to 5 sub modules. Then additional banks of main and sub modules can be added as required. Each additional bank as a stand alone unit or configured in controller and receptor mode.



A six bank MAXIGAS installation, (five generators in view) satisfy the peak demand, each capable of supplying 20% of the output. The banks cascade on and off load as the flow varies with factory production requirements. This saves significant energy costs during low flow periods, in the form of lower compressed air demand. The sixth bank provides 100% back-up and allows for 100% up-time during maintenance.

MIDIGAS

Nitrogen Gas Generators

The cost-effective, reliable and safe solution for small to medium nitrogen requirements.



Product Selection

Performance data is based on 7 bar g (100 psi g) air inlet pressure and 20°C - 25°C (66°F - 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	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	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	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
Outlet Pressure	bar g	5.6	5.4	5.9	5.7	5.6	5.7	6.0	6.0	5.8	5.7	5.6
	psi g	81	78	86	83	81	83	87	87	84	83	81

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

Inlet Parameters

Inlet Air Quality	ISO 8573-1:2010 Class 2.2.2 (2.2.1 with high oil vapour content)
Inlet Air Pressure Range	6 - 13 bar g 87 - 217 psi g

Electrical Parameters

Supply Voltage	115 / 230 ±10% V ac 50/60Hz
Power	80 W
Fuse	3.15A (Anti Surge (T), 250v, 5 x 20mm HBC, Breaking Capacity 1500A @ 250v, UL Listed)

Environmental Parameters

Ambient Temperature	5 - 50 °C 41 - 122 °F
Humidity	50% @ 40°C (80% MAX ≤ 31°C)
IP Rating	IP20 / NEMA 1
Altitude	<2000m (6562 ft)
Noise	< 80 dB (A)

Port Connections

Air Inlet	G ¹ / ₂ "
N ₂ Outlet to Buffer	G ¹ / ₂ "
N ₂ Inlet from Buffer	G ¹ / ₂ "
N ₂ Outlet	G ¹ / ₂ "

Weights and Dimensions

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

Packed Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight	
	mm	in	mm	in	mm	in	kg	lb
MIDIGAS2	612	24	1490	59	950	38	174	383
MIDIGAS4	612	24	1490	59	950	38	221	487
MIDIGAS6	612	24	1490	59	950	38	272	597

MAXIGAS

Nitrogen Gas Generators

The cost-effective, reliable and safe solution for medium to large nitrogen requirements.



Product Selection

Performance data is based on 7 bar g (100 psi g) air inlet pressure and 20°C - 25°C (66°F - 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	50ppm	100ppm	250ppm	500ppm	0.1%	0.5%	1.0%	2.0%	3.0%	4.0%	5.0%
MAXIGAS104	m ³ /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	m ³ /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	m ³ /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	m ³ /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	m ³ /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	m ³ /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	m ³ /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
Outlet Pressure	bar g	5.5	6.1	6.1	6.1	6.1	6.1	6.0	5.9	5.8	5.7	5.7	5.6
	psi g	80	88	88	88	88	88	87	86	84	83	83	81

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

Inlet Parameters

Inlet Air Quality	ISO 8573-1:2010 Class 2.2.2 (2.2.1 with high oil vapour content)
Inlet Air Pressure Range	6 - 15 bar g 87 - 217 psi g

Electrical Parameters

Supply Voltage	100 - 240 ±10% V ac 50/60Hz
Power	80 W
Fuse	3.15A (Anti Surge IT), 250v, 5 x 20mm HBC, Breaking Capacity 1500A @ 250v, UL Listed

Environmental Parameters

Ambient Temperature	5 - 50 °C 41 - 122 °F
Humidity	50% @ 40°C (80% MAX ≤ 31°C)
IP Rating	IP20 / NEMA 1
Altitude	<2000m (6562 ft)
Noise	< 80 dB (A)

Port Connections

Air Inlet	G1"
N ₂ Outlet to Buffer	G1"
N ₂ Inlet from Buffer	G1/2"
N ₂ Outlet	G1/2"

Weights and Dimensions

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

Packed Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight	
	mm	in	mm	in	mm	in	kg	lb
MAXIGAS104	800	31	2020	80	1000	39	464	1023
MAXIGAS106	800	31	2020	80	1000	39	521	1149
MAXIGAS108	800	31	2020	80	1200	47	614	1354
MAXIGAS110	800	31	2020	80	1250	49	744	1640
MAXIGAS112	800	31	2020	80	1510	60	790	1742
MAXIGAS116	800	31	2020	80	1820	72	980	2160
MAXIGAS120	800	31	2020	80	2270	90	1360	3015

NitroFlow Basic

Nitrogen Gas Generators

The cost-effective, reliable and safe solution for small to medium nitrogen requirements.



Product Selection

NitroFlow Basic LP and HP have an integral compressor requiring normal clean ambient air at 10°C – 35°C, < 90% relative humidity

Oxygen Content										
Model	Unit	Max. N ₂ Pressure	0.1%	0.3%	0.5%	1.0%	2.0%	3.0%	4.0%	5.0%
NitroFlow Basic LP Mobile	L/min	2 bar g	10	15	18	24	31	35	40	43
	cfh		21.2	31.8	38.2	50.8	65.7	74.2	84.8	91.2
NitroFlow Basic HP Mobile	L/min	8 bar g	7.6	12	13	18	23	26	30	32
	cfh		16.1	25.4	27.6	38.2	48.8	55.1	63.6	67.8

Litre reference standard = 20°C, 1013 millibar (absolute), 0% relative water vapour pressure

CO ₂	10%	20%	30%	40%	50%	60%	70%
Conversion Factor	1.11	1.25	1.42	1.67	2.0	2.5	3.33

To calculate total mixed gas outlet flow rate when using NitroFlow Basic HP wall mount + Mixer add on, multiply the corresponding nitrogen outlet capacity of the standard NitroFlow Basic HP by the conversion factor in the table above.

Technical Data

	NitroFlow Basic LP Mobile	NitroFlow Basic HP Mobile
Ambient Temperature Range		10°C – 35°C
Maximum Nitrogen Outlet Pressure	2 bar g	8 bar g
Air Inlet Quality		Normal clean ambient air < 90% Relative Humidity
Electrical Supply		Available as 120VAC/1ph/60Hz or 240VAC/1ph/50Hz
Power Consumption		1.4kW
Inlet / Outlet Connections		Nitrogen & Permeate Outlet – G ¹ /4 or 1/4 NPT

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight	
	mm	in	mm	in	mm	in	kg	lb
NitroFlow Basic LP Mobile	700	27.6	310	12.2	900	35.4	92.5	204
NitroFlow Basic HP Mobile	700	27.6	310	12.2	900	35.4	92.5	204

NitroFlow

Nitrogen Gas Generators

The cost-effective, reliable and safe solution for medium nitrogen requirements.



Product Selection

Performance data for HP models is based on 7 bar g (100 psi g) air inlet pressure and 20°C - 30°C air inlet temperature. Consult Parker domnick hunter for performance under other specific conditions. NitroFlow LP has a in-built compressor requiring normal clean ambient air at 10°C - 35°C, < 90% relative humidity

Oxygen Content							
Model	Unit	0.5%	1.0%	2.0%	3.0%	4.0%	5.0%
NitroFlow LP1	m³/hr	1.1	1.5	2.2	2.7	3.1	3.5
	cfm	0.65	0.9	1.3	1.6	1.8	2.1
NitroFlow LP2	m³/hr	2.2	3.0	4.5	5.3	6.0	6.8
	cfm	1.3	1.6	2.6	3.1	3.5	4.0
NitroFlow LP3	m³/hr	3.4	5.3	6.6	7.8	9.0	10.2
	cfm	2.0	3.1	3.9	4.6	5.3	6.0
NitroFlow LP4	m³/hr	n/a	n/a	n/a	10.3	12.0	13.6
	cfm	n/a	n/a	n/a	6.1	7.0	8.0
NitroFlow HP1	m³/hr	1.7	2.5	3.8	5.0	6.3	7.5
	cfm	1.0	1.5	2.2	3.0	3.7	4.4
NitroFlow HP2	m³/hr	3.4	5.0	7.6	10.0	12.6	15.0
	cfm	2.0	3.0	4.5	6.0	7.4	9.0
NitroFlow HP3	m³/hr	5.1	7.5	11.4	15.0	18.9	22.5
	cfm	3.0	4.4	6.7	9.0	11.1	13.3

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

Technical Data

	LP1	LP2	LP3	LP4	HP1	HP2	HP3
Temperature Range			10°C - 35°C Ambient		10°C - 40°C Compressed Air Inlet		
Nitrogen Outlet Pressure				2 bar g	Air inlet minus 2 bar g		
Air Inlet Pressure Range			N/A - built in compressor		5 - 13 bar g		
Air Inlet Quality	Pressure Dewpoint				< +5°C		
Particulate			< 90% Relative Humidity		5 Micron		
Oil					< 3.0mg/m³		
Electrical Supply		230VAC/1ph/50Hz	400VAC/3ph+N+E/50Hz		100-115-230VAC/1ph/50Hz-60Hz		
Power Consumption	1.7kW	3.2kW	4.8kW	6.3kW		30W	
Inlet / Outlet Connections			Nitrogen and Permeate G1		Air Inlet, Nitrogen Outlet and Permeate G1		

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight	
	mm	in	mm	in	mm	in	kg	lb
NitroFlow LP1	1224	48.2	540	21.3	725	28.5	150	331
NitroFlow LP2	1224	48.2	540	21.3	725	28.5	200	441
NitroFlow LP3	1224	48.2	810	31.9	725	28.5	320	706
NitroFlow LP4	1224	48.2	810	31.9	725	28.5	370	816
NitroFlow HP1	1224	48.2	270	10.6	725	28.5	85	187
NitroFlow HP2	1224	48.2	270	10.6	725	28.5	95	209
NitroFlow HP3	1224	48.2	270	10.6	725	28.5	105	232

NitroSource HiFluxx

Nitrogen Gas Generators

The cost-effective, reliable and safe solution for medium to large nitrogen requirements.



Product Selection

Performance data is based on 7 bar g (100 psi g) air inlet pressure and 20°C - 30°C air inlet temperature. Consult Parker domnick hunter for performance under other specific conditions.

Oxygen Content							
Model	Unit	0.5%	1.0%	2.0%	3.0%	4.0%	5.0%
Main Unit	m³/hr	6.0	9.4	16.2	22.0	28.0	34.0
	cfm	3.5	5.5	9.5	12.9	16.5	20.0
Main + 1 Sub	m³/hr	12.0	18.8	32.4	44.0	56.0	68.0
	cfm	7.1	11.1	19.1	25.9	33.0	40.0
Main + 2 Subs	m³/hr	18.0	28.2	48.6	66.0	84.0	102.0
	cfm	10.6	16.6	28.6	38.9	49.5	60.0
Main + 3 Subs	m³/hr	24.0	37.6	64.8	88.0	112.0	136.0
	cfm	14.1	22.2	38.2	51.8	66.0	80.0
Main + 4 Subs	m³/hr	30.0	47.0	81.0	110.0	140.0	170.0
	cfm	17.7	27.7	47.7	64.8	82.5	100.0
Main + 5 Subs	m³/hr	36.0	56.4	97.2	132.0	168.0	204.0
	cfm	21.2	33.2	57.3	77.8	98.9	120.0

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

Technical Data

Air Inlet Temperature Range	10 - 40°C
Maximum Nitrogen Outlet Pressure	11 bar g
Air Inlet Pressure Range	4-13 bar g
Air Inlet Quality	Pressure Dewpoint
	<+5°C
Particulate	<5 micron
Oil	<3 mg/m³
Electrical Supply	90-250 VAC/50-60Hz
Inlet / Outlet Connections - Main	Air inlet G1 1/4, N₂ Outlet G1, Premeate Vent 110mm
Outlet Connection - Sub Unit	N₂ Outlet G1, Premeate Vent 110mm

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight	
	mm	in	mm	in	mm	in	kg	lb
Main Unit	1928	75.9	725	28.5	490	19.3	180	397
Main + 1 Sub	1928	75.9	725	28.5	760	29.9	275	607
Main + 2 Subs	1928	75.9	725	28.5	1030	40.6	370	816
Main + 3 Subs	1928	75.9	725	28.5	1300	51.2	465	1025
Main + 4 Subs	1928	75.9	725	28.5	1570	61.8	560	1235
Main + 5 Subs	1928	75.9	725	28.5	1840	72.4	655	1444



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