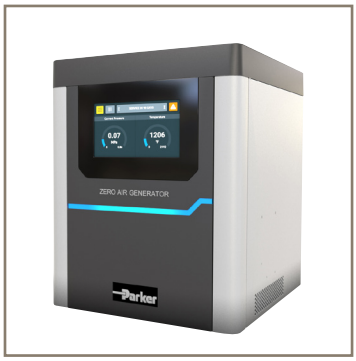


Chromatography

Product Brochure

Parker

ENGINEERING YOUR SUCCESS.

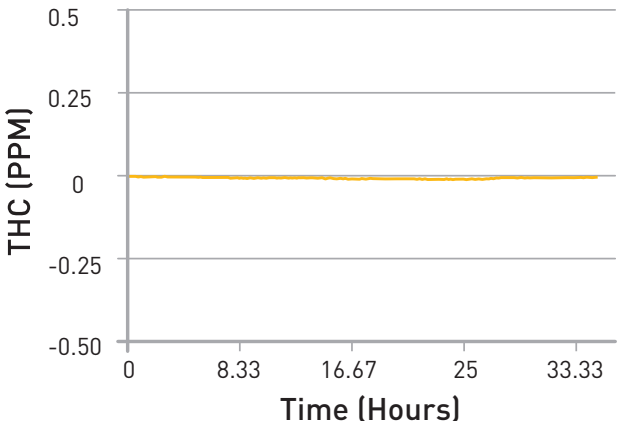
FID Gas Stations

Designed to provide fuel gas and support air to 5-6 flame ionization detectors, flame photometric detectors, or total hydrocarbon analyzers, Parker **FID Gas Stations** provide both hydrogen gas and zero grade air to FID detectors on gas chromatographs. Hydrogen gas is produced from deionized water using a proton exchange membrane cell. The gas stations' generator compartment utilizes the principle of electrolytic dissociation of water and hydrogen proton conduction through the membrane, and supplies up to 250 cc/min of 99.9995% pure hydrogen with pressures to 60 psig. The zero air compartment produces up to 2500 cc/min of zero grade air by purifying on-site compressed air to a total hydrocarbon concentration of < 0.1 ppm (measured as methane).

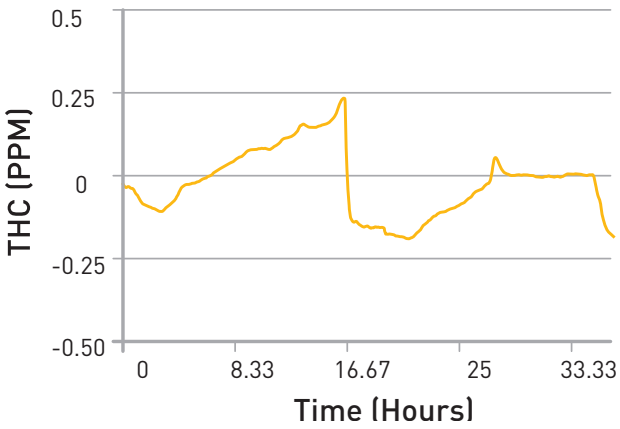
- Ideal for up to 5-6 FIDs
- Increases analysis accuracy
- Reduces the cleaning requirement for the detector
- Recommended by many GC and column manufacturers
- ROI in less than one year
- Automatic water fill
- Silent operation
- Minimal operator attention required
- Meets NFPA 50A regulations
- Meets CSA, UL, and IEC1010

The chromatograms (below) compare baselines produced by a Parker FID gas station and bottled fuel air. The baseline produced by the Parker generator is very flat, with no fluctuations or peaks, in comparison with the chromatogram of the bottled air fuel supply, which has many peaks ranging from .25 ppm to -.25 ppm.

Baseline FID-2500 Gas Station



Baseline Bottled Fuel Air

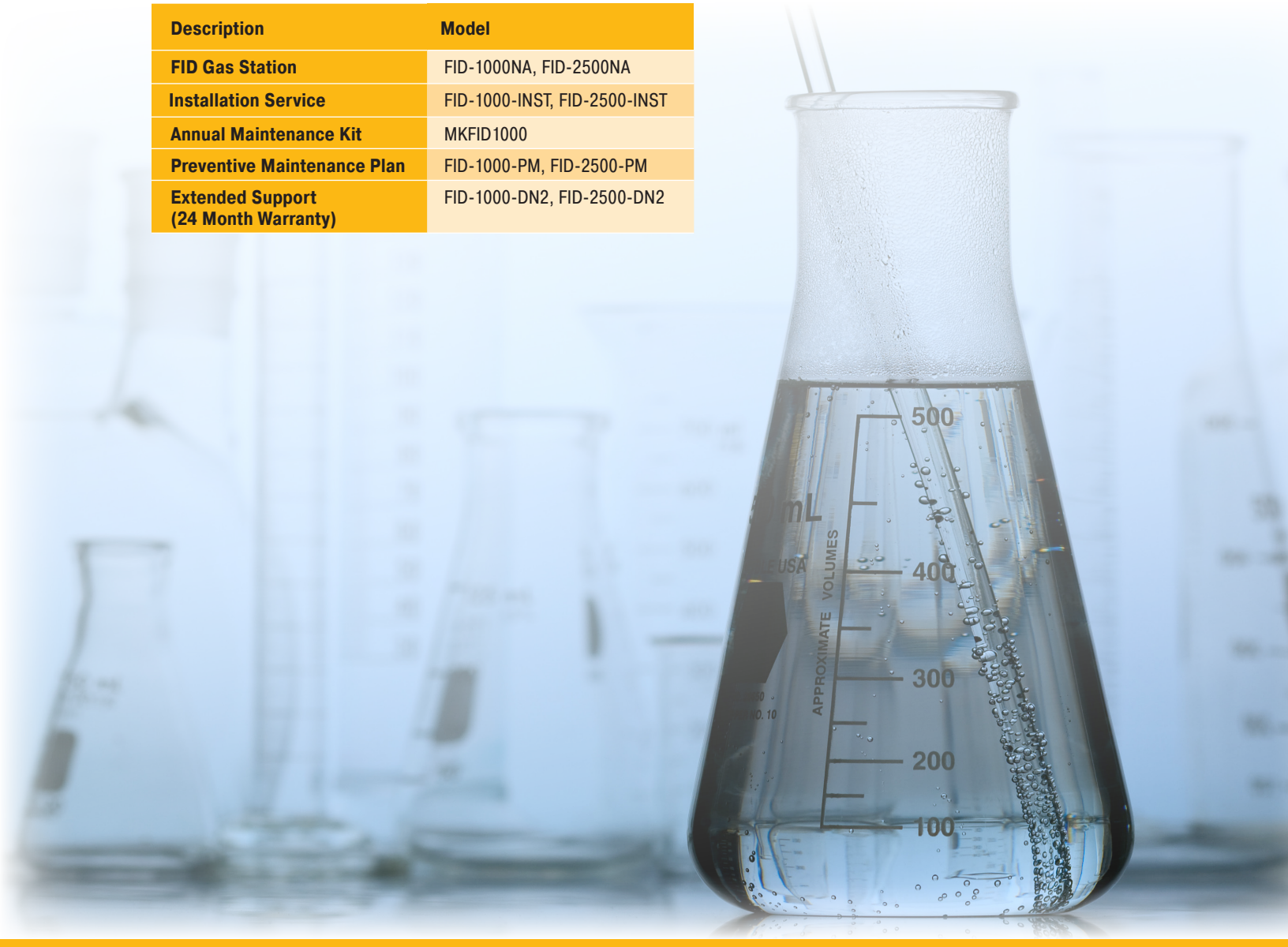


Principal Specifications

Model	FID-1000NA	FID-2500NA
Hydrogen Purity	99.9995%	
Zero Air Purity	< 0.1 ppm (total hydrocarbon as methane)	
Maximum Hydrogen Flow Rate	90 mL/min	250 mL/min
Maximum Zero Air Flow Rate	1000 mL/min	2500 mL/min
Electrical Requirements	120/230 VAC, 60/50 Hz, 4 Amps	
Hydrogen Outlet Pressure	60 psig	
Zero Air Outlet Pressure	40-125 psig	
Certifications	IEC 1010-1; CSA 1010; UL 3101; CE Mark	
Dimensions	10.5" w x 17" d x 16.5" h (27 cm x 43 cm x 42 cm)	
Inlet Port	1/4" NPTF compressed air supply	
Outlet Ports	1/8" compression	
Shipping Weight	53 lbs / 24 kg	

Ordering Information

Description	Model
FID Gas Station	FID-1000NA, FID-2500NA
Installation Service	FID-1000-INST, FID-2500-INST
Annual Maintenance Kit	MKFID1000
Preventive Maintenance Plan	FID-1000-PM, FID-2500-PM
Extended Support (24 Month Warranty)	FID-1000-DN2, FID-2500-DN2



Zero Air Generators

ChromGas ZAG Series

Parker's ChromGas ZAG generators provide a continuous stream of hydrocarbon free air from an external dry compressed air source, offering superior limits of detection over and above other modes of supply. Flow rates range from 3.5 L/min to 30 L/min and can support up to 75 flame detectors.

When combined with ChromGas H2F, the system forms a modular FID gas station suitable for all known GC combustion detectors such as FID, FPD, and NPD. Its state-of-the-art control system, elevates both user-friendliness and performance monitoring.

- UHP organic free air for GC
- Increase resolution and detection limits of analysis
- Compact design
- Minimal operator attention required
- Typical payback of 2 years
- Stackable with other ChromGas products
- Meets CSA, UL, CE and UKCA

Number of FIDS	Model Number
Up to 2	75-83NA*
Up to 8	ZAG-3.5L
Up to 16	ZAG-7L
Up to 40	ZAG-18L
Up to 66	ZAG-30L

Based on a 450 ccm fuel air rate.

Principal Specifications

Model*	75-83NA**	ZAG-3.5L	ZAG-7L	ZAG-18L	ZAG-30L
Max. Zero Air Flow Rate	1 L/min	3.5 L/min	7 L/min	18 L/min	30 L/min
Outlet Hydrocarbon Concentration (as methane)	< 0.1 ppm	< 0.05 ppm	< 0.05 ppm	< 0.05 ppm	< 0.1 ppm
Min./Max. Inlet Air Pressure	40-125 psi g (2.8-8.6 bar g)				
Max. Inlet Hydrocarbon Concentration (as methane)	100 ppm				
Pressure Drop at Maximum Flow Rate	4 psig (0.3 barg)				
Max. Inlet Air Temperature	78°F (25°C)				
Inlet/Outlet Ports	1/4" NPT (female)				
Electrical Requirements	NA Models: 120V 60Hz, WD Models: 220V 50Hz				
Dimensions	12" h x 10" w x 3" d (30 cm x 25 cm x 8 cm)	17.2" h x 13.5" w x 16" d (437 mm x 343 mm x 407 mm)			
Shipping Weight	7 lbs. (3 kg)	41 lbs. (19 kg)			

*For 120V version, add NA to end of model number. For 220V version, add WD to end of model number. Example: ZAG-7LNA.

**75-83NA is not apart of the ChromGas Series. Consult factory for more information.

Ordering Information

Description	Part Number
Maintenance Kit for Model 75-83NA	MK7583
12 Month Maintenance Kit for ChromGas Models	MKZAG-12M
36 Month Maintenance Kit for ChromGas Models	MKZAG-3.5LNA-36M, MKZAG-7LNA-36M, MKZAG-18LNA-36M, MKZAG-30LNA-36M, MKZAG-3.5LWD-36M, MKZAG-7LWD-36M, MKZAG-18LWD-36M, MKZAG-30LWD-36M
Installation Kit (for All Models)	IK76803
Preventive Maintenance Plan (12 Month)*	ZAG-3.5LNA-PM, ZAG-7LNA-PM, ZAG-18LNA-PM, ZAG-30LNA-PM
Preventive Maintenance Plan (36 Month)*	ZAG-3.5LNA-PMPLUS, ZAG-7LNA-PMPLUS, ZAG-18LNA-PMPLUS, ZAG-30LNA-PMPLUS
Extended Warranty Plans	Consult Parker for Options

Flame-Proof Zero Air Generator

Model 75-82EU

The Parker **Model 75-82S Zero Air Generator** produces up to 1,000 cc/min. of high-purity zero. Using state-of-the-art catalytic technology, the generator continuously converts compressed air into zero-grade air, at safe regulated pressures, and can be used as fuel air to process GC-FIDs, and zero grade gas /zero reference for analytical instruments. Its housing is a standard Crouse-Hinds® flame-proof enclosure designed to operate in a class 1, division 1, groups B, C, or D environment and its internals are all stainless steel.

Zero grade air is produced by means of catalytic oxidation. Compressed air is channeled into a heated catalyst bed where the hydrocarbons are converted to carbon dioxide and water vapor, producing zero-grade air with less than 0.1 ppm hydrocarbon content (measured as methane). Using a zero air generator for fuel air for GC analysis allows for a lower, more stable baseline signal to be obtained. Lower baseline noise allows for a higher signal-to-noise ratio, giving rise to higher sensitivity or larger peak areas, resulting in increased accuracy and reduced cleaning requirement of the detector.

- Safe, even in explosive environments
- Minimal operator attention required
- Produces a continuous supply of ultra high purity zero grade air
- Compact design requires small footprint

Principal Specifications

Description	Model
Zero Air Generator	75-82EU, 75-82EU-220
ATEX Marking	11 2 G Ex db IIB +H2 T6, Gb
Maximum Flow Rate	1000 mL/min
Total Hydrocarbon Concentration	< 0.1 ppm (measured as methane)
Min./Max. Inlet Pressure	40 psig/125 psig
Max. Inlet Hydrocarbon Content	100 ppm
Max. Inlet Air Dewpoint	10°F (5°C) above ambient
Pressure Drop at Maximum Flow Rate	< 8 psid
Ambient Temperature	-4°F to 140°F (-20°C to 60°C)
Electrical Requirements	120/230 VAC, 60/50 Hz
Shipping Weight	17 lbs. (7.5 kg)
Dimensions	14" w x 9" h x 6" d (34 cm x 23 cm x 15 cm)

Ordering Information

Description	Model
Zero Air Generator	75-82EU
Replacement Catalyst Module	75398, 75398-220 (-220 model)
Final Filter Cartridge	13299
Optional Prefilter Assemblies	2002-1B1-BX
Installation Kit	IK76803

Nitrogen Generator with Research Grade Purity

Model UHPN2-1100

The **UHPN2 Nitrogen Generator** is designed to convert standard compressed air into nitrogen with purities up to 99.9999%, far exceeding the specification of UHP cylinder gas. It produces up to 1.1 lpm of UHP nitrogen gas utilizing a combination of state-of-the art purification and premier filtration technologies that includes high-efficiency coalescing pre-filters and a 0.01 micron (absolute) membrane filter.

Oxygen, carbon dioxide and water vapor are removed via pressure swing adsorption technology and a catalyst module oxidizes hydrocarbons from the inlet air supply. The UHPN2 is ideal for carrier gas applications including gas chromatography, make-up gas and low flow sample concentrators. Its compact design requires a minimal footprint and frees up valuable laboratory floor space.

- Produces UHP nitrogen on-demand
- Designed for continuous operation
- Eliminates dangerous gas cylinders
- Requires minimal operator attention
- Virtually maintenance-free

Ordering Information

Description	Model
Ultra High Purity Nitrogen Generator	UHPN2-1100
Optional Prefilter Scrubber Assembly	76080
Maintenance Kit	MK7694
Installation Kit	IK7694
Preventive Maintenance Plan	UHPN2-1100-PM
Extended Support (24 Month Warranty)	UHPN2-1100-DN2

Principal Specifications

Description	UHPN2-1100
Maximum Nitrogen Flow Rate	See flow table
Nitrogen Purity	99.9999%
Maximum Nitrogen Output Pressure	See flow table
CO Concentration	<1 ppm
CO_2 Concentration	<1 ppm
O_2 Concentration	<1 ppm
H_2O Concentration	<1 ppm
Argon Concentration	0.9%
Minimum/Maximum Inlet Pressure	60 psig/125 psig
Recommended Inlet Temperature	78°F (25°C)
Ambient Operating Temperature	60°F to 100°F (16°C to 38°C)
Maximum Air Consumption	42 L/min (1.5 scfm)
Inlet Connection	1/4" NPT (female)
Outlet Connection	1/8" NPT (female)
Electrical Requirements	120/230 VAC, 60/50 Hz
Power Consumption	700 Watts
Dimensions	12" w x 16" d x 35" h (31 cm x 41 cm x 89 cm)
Shipping Weight	137 lbs. (62 kg)

Purity specification for Nitrogen does not include Argon concentration.

Flow Table

Inlet Air Pressure (psig)	Maximum Outlet Flow (mL/min.)	Max. Outlet Pressure (psig)
125	1100	85
110	1000	75
100	900	65
90	800	60
80	700	50
70	600	45
60	500	35

Zero Nitrogen and Nitrogen Generators for GC Carrier Gas and Makeup Gas Applications

Nitrogen on demand, up to 5,000 mL/min

UHPZN2 & UHPN2 Series

Parker Zero Nitrogen and Nitrogen Generators convert a standard compressed air supply to nitrogen gas with purities up to 99.9995% and <0.1ppm of hydrocarbons using industry-leading filtration and pressure swing adsorption (PSA) technology.

Standard compressed air is filtered by high-efficiency coalescing filters to remove all contaminants down to 0.01 micron. The air then passes through two columns filled with proprietary carbon molecular sieve which adsorbs oxygen, carbon dioxide, moisture and hydrocarbons, which are desorbed to atmosphere during the pressure swing cycle thereby producing a supply of ultra-pure nitrogen. [For ultra-sensitive applications such as ECD, units also include the addition of a heated catalyst module to ensure hydrocarbons are removed to < 0.1ppm.]

Typical applications include GC make up gas and carrier gas, including ECD (Electron Capture Detector), DSC (Differential Scanning Calorimeter), and virtually any analytical instrument that requires a small flow of ultra-high purity zero nitrogen.

- Integral oil-free compressors with noise reduction technology
- Minimal operator attention and maintenance required
- Economy mode: increases compressor life and ongoing operational costs
- Designed for continuous operation with minimal operator attention

UHPZN2 Series

Principal Specifications

Description	UHPZN2-1000-W	UHPZN2-1000C-W	UHPZN2-3000-W	UHPZN2-3000C-W
Purity	99.9995%	99.9995%	99.9999%	99.9999%
Hydrocarbon Concentration	<0.1ppm			
CO Concentration	<1 ppm			
CO_2 Concentration	<1 ppm			
H_2O Concentration	<1 ppm			
Flow Rates	1 L/min	1 L/min	3 L/min	3 L/min
Inlet Pressure (non-compressor systems only)	130.5 - 143.6 psig (9 - 9.9 bar)			
Outlet Pressure	72 psig (5 bar)			
Integral Compressor	No	Yes	No	Yes
Inlet Connection	1/4”	N/A	1/4”	N/A
Outlet Connection	1/8”			
Ambient Temperature	60°F to 77°F (15°C to 25°C)			
Electrical Requirements	104-127 VAC - 60 Hz (207-253 VAC - 50/60 Hz available upon request)			
Power Consumption	105 Watts	473 Watts	105 Watts	473 Watts
Dimensions	34.2” h x 13.6” w x 26.3” d (869 mm x 345 mm x 668 mm)			
Shipping Weight	190 lbs (86 Kg)	212 lbs (96 Kg)	190 lbs (86 Kg)	212 lbs (96 Kg)

Ordering Information

Description	Model UHPZN2
1,000 mL/min Zero UHP Nitrogen Generator with Integral Compressor	UHPZN2-1000-W non compressor, UHPZN2-1000C-W
3,000 mL/min Zero UHP Nitrogen Generator with Integral Compressor	UHPZN2-3000-W non compresssor, UHPZN2-3000C-W
Installation Kit	IK7694

Maintenance Items	Model Number	Change Frequency
Filter Kit - All Non Compressor Models	606272561	12 months
Filter Kit - All Compressor Models	606272563	12 months
Compressor Kit 120V	606272583	Every 8000Hrs or 24 months (whichever comes first)

UHPN2 Series

Principal Specifications

Description	UHPN2-750-W	UHPN2-750C-W	HPN2-5000-W	HPN2-5000C-W
Purity	99.9995%	99.9995%	99.999%	99.999%
Hydrocarbon Concentration	N/A			
CO Concentration	<1 ppm			
CO_2 Concentration	<1 ppm			
H_2O Concentration	<1 ppm			
Flow Rates	750 mL/min	750 mL/min	5000 mL/min	5000 mL/min
Inlet Pressure (non-compressor systems only)	115-145 psig (8-9.9 bar)	N/A	115-145 psig (8-9.9 bar)	N/A
Outlet Pressure	75 psig (5 bar)			
Integral Compressor	No	Yes	No	Yes
Inlet Connection	1/4”	N/A	1/4”	N/A
Outlet Connection	1/8”			
Ambient Temperature	60°F to 77°F (15°C to 25°C)			
Electrical Requirements	104-127 VAC - 60 Hz (207-253 VAC - 50/60 Hz available upon request)			
Power Consumption	89 Watts	596 Watts	89 Watts	596 Watts
Dimensions	34” h x 14” w x 16” d (869 mm x 345 mm x 417 mm)			
Shipping Weight	97 lbs	110 lbs	190 lbs	210 lbs

Ordering Information

Description	Model UHPN2
750ml/min UHP Nitrogen Generator	UHPN2-750C (750 mL/min)
750ml/min UHP Nitrogen Generator with Integral Compressor	UHPN2-750C (750 mL/min with integral compressor)
5000ml/min HP Nitrogen Generator	HPN2-5000 (5000 mL/min)
5000ml/min HP Nitrogen Generator with Integral Compressor	HPN2-5000C (5000 mL/min with Integral compressor)
Installation Kit	IK7694

Maintenance Items	Model Number	Change Frequency
Filter Kit - UHPN2-750	606272551	12 months
Filter Kit - HPN2-5000	606272557	12 months
Filter Kit - UHPN2-750C	606272553	12 months
Filter Kit - HPN2-5000C	606272559	12 months
Compressor Kit 120V - UHPN2-750C-W	606272579	8,000 hours or 24 months (which ever comes first)
Compressor Kit 120V - HPN2-5000C-W	606272583	8,000 hours or 24 months (which ever comes first)

NitroVap Gas Generators

NitroVap-1LV & -2LV

Parker NitroVap Nitrogen Generators provide clean, ultra-dry dewpoint evaporator grade nitrogen at high output flows from any standard laboratory compressed air source.

Nitrogen is produced by utilizing a combination of filtration and membrane separation technologies. A high-efficiency prefiltration system pretreats the compressed air to remove all contaminants down to 0.01 micron.

Hollow fiber membranes subsequently separate the clean air into a concentrated nitrogen output stream and an oxygen enriched permeate stream, which is vented from the system.

Unique membrane separation technology allows immediate nitrogen delivery to the sample concentrator. “Lock-it-and-leave-it” operation of the sample concentrator is maintained without downtime or running out of gas mid-blow-down.

- Ideal for any combination of sample evaporators - up to 100 nozzle positions
- Accelerates evaporation by decreasing the partial vapor pressure above the solvent liquid
- Recommended by many sample concentrator and sample evaporator manufacturers
- Payback period of typically less than one year
- Sleep economy mode - eliminates compressed air consumption when the sample concentrator not in use
- Minimal operator attention required
- Compact design requires minimal footprint

Ordering Information

Description	Model
NitroVap Nitrogen Generators	NitroVap-1LV, NitroVap-2LV
Maintenance Kit (Includes 1 each filter cartridge, and 1 each membrane cartridge)	MKNITROVAP
Preventive Maintenance Plan	NITROVAP-1LV-PM NITROVAP-2LV-PM
Extended Support with 24 Month Warranty	NITROVAP-DN2

Use with these and other blowdow evaporators

- TurboVap from Biotage
- N-Evap from Organomation
- RapidVap from LabConco
- Reacti-Vap from Fisher Pierce
- Duo-Vap from Jones Chromatography
- DryVap from Horizon Technology
- Evaporex from Apricot

Principal Specifications

NitroVap-1LV & -2LV	
Nitrogen Dewpoint	Down to -20°F (-29°C) atmospheric
Maximum Nitrogen Flow Rate	NitroVap-1LV up to 80 slpm @ 100 psig input, up to 140 slpm @ 125 psig input
	NitroVap-2LV up to 160 slpm @ 100 psig input, up to 287 slpm @ 125 psig input
Electrical Requirements	None
Nitrogen Outlet Pressure	0-15 psig user controlled
Dimensions	10.63” w x 14.1” d x 16.5” h (26.92 cm x 35.81 cm x 41.91 cm)
Inlet Port/Outlet Port	1/4” NPT (female)
Shipping Weight	53 lbs/24 kg

Parker Filtration Group

Aerospace Filtration Division
Greensboro, North Carolina
336 668 4444

Bioscience & Water Filtration Division
Bioscience Filtration
Oxnard, California
877 784 2234

Water Purification
Carson, California
310 608 5600

Engine Mobile Aftermarket Division
Kearney, Nebraska
308 234 1951

Engine Mobile Original Equipment Division
Modesto, California
209 521 7860

HVAC Filtration Division
Jeffersonville, Indiana
866 247 4827

Hydraulic & Fuel Filtration Division
Metamora, Ohio
419 644 4311

Industrial Gas Filtration & Generation Division
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800 343 4048

Industrial Process Filtration Division
Mineral Wells, Texas
940 325 2575

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The products described herein can expose you to chemicals known to the State of California to cause cancer or reproductive harm.
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