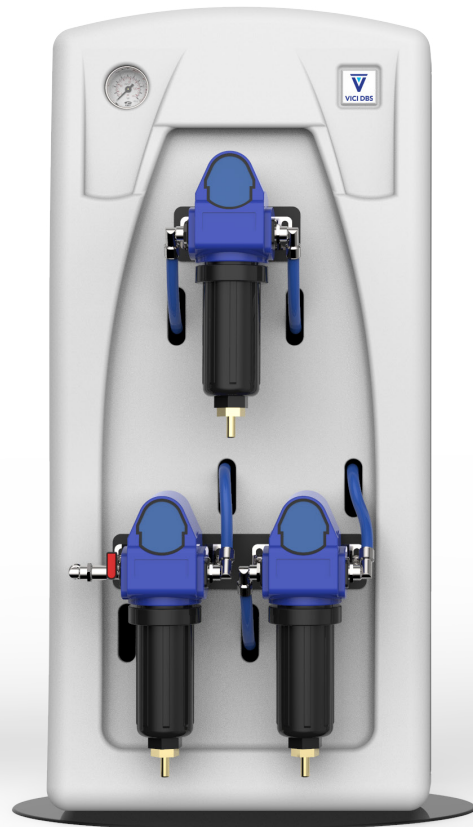


WHISPER-0 & MINI WHISPER NITROGEN GENERATOR

 **VICI
DBS**
www.vicidbs.com



DESCRIPTION

The VICI DBS® Whisper-0 nitrogen generator can produce up to 120 L/min of high purity LC/MS grade nitrogen at pressures up to 8 barg (116 psig). These generators are engineered to transform standard compressed air into a safe regulated nitrogen supply with minimal operator attention and maintenance. Nitrogen is produced by utilizing a combination of filtration and membrane separation technologies. A standard supply of compressed air is filtered by high efficiency coalescing filters to remove all contaminants down to 0.1 micron. A unique proprietary membrane then separates the air into a concentrated nitrogen stream.

Membrane technology offers many unique performance benefits for LC/MS users including phthalate free nitrogen, silent operation, no moving parts and no electrical requirements. The generators can be installed directly in the laboratory with the Whisper-0 mounting to the wall and the Whisper-0 Mini to the floor. Both require minimal operator attention or maintenance. The generators are designed to run continuously or on demand providing a clean, dry high purity nitrogen supply.



INCREASE EFFICIENCY

The relatively high gas volumes required by LC/MS instruments make cylinder supply inappropriate and liquid nitrogen expensive. A constant, uninterrupted gas supply eliminates interruptions of analysis to change cylinders.



RETURN ON INVESTMENT

Payback period can be as short as 6 to 12 months.



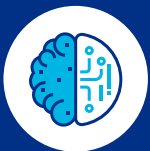
IMPROVE SAFETY

Nitrogen produced at low pressure and ambient temperature removes the hazards associated with high pressure cylinders and liquid Dewars.



ENHANCE PERFORMANCE

Production of a constant flow and pressure of nitrogen improves the consistency of the LC/MS analysis, results and reproducibility.



SUPERIOR TECHNOLOGY

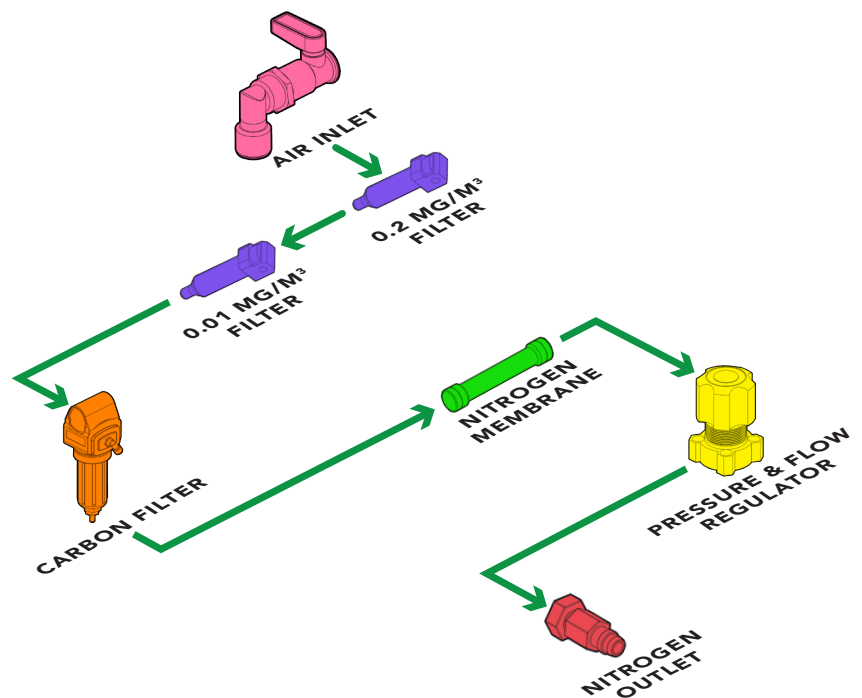
The VICI DBS membrane nitrogen generators require no electricity, have no moving parts and minimal noise.

OPERATING DIAGRAM

Membrane separation technique:

Compressed air is forced through a hollow fiber membrane, with selective permeation of the different components - nitrogen, oxygen, carbon dioxide, water vapor and traces of rare gases - depending on the rate of diffusion.

The rate of diffusion of nitrogen through the membrane is slower than the other components, which thus flow outside of the fiber membrane. Just nitrogen remains inside which is then subsequently discharged, ready for use.





FEATURES

Produces a continuous supply of high purity nitrogen | On-demand supply 24/7 | Flow rate at 8 barg (116 psig): 8 to 120 L/min | Purity: LC/MS grade | Integrated economy mode as standard | Proprietary membrane technology | 2-year complete product warranty | No noise, no moving parts and no electricity



BENEFITS

Eliminates dangerous high pressure cylinders helping to keep your employees safer | Removes the logistics, inconvenience, downtime and costs of a cylinder system | Flow capacity to match your specific instrument demands | Ideal for all LC/MS applications | Reduces compressed air consumption and cost | Superior air purification with long life membrane | Peace of mind | Install directly in the laboratory



APPLICATIONS

LC/MS INSTRUMENTS

- Nebulizing gas
- Curtain gas
- Shield gas
- Sheath gas
- Electrospray gas
- APCI gas
- Jet stream gradient

SPECTROSCOPY

- Nuclear magnetic resonance spectrometers (NMR)

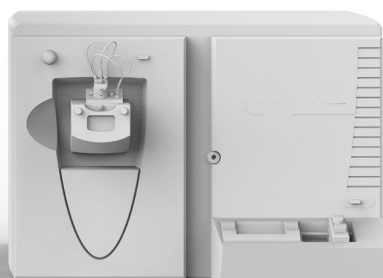
ANALYZERS

- Thermal analyzers (TGA/DSC)

OTHER APPLICATIONS

- Sample concentrators
- Evaporative light scattering detector (ELSD)
- Corona detectors
- Charged aerosol (CAD)
- Sample evaporators
- Cell incubators
- IVF Stem Cell incubators

- Mask aligner
- Fume hood/cabinet purge
- 3D printer inerting
- Glove box purge



MODELS & SPECS

	MINI WHISPER	WHISPER 0-40	WHISPER 0-80	WHISPER 0-120
Flow L/min	12	40	80	120
Purity	99% @ 12 L/min 99% @ 10 L/min	97% @ 40 L/min 99% @ 20 L/min	97% @ 80 L/min 98% @ 50 L/min	95% @ 120 L/min 98% @ 50 L/min
Dewpoint	-50 °C			
Outlet pressure barg (psig)	7 (100)			
Inlet pressure barg (psig)	8.5 to 10 (123 to 160)			
Actual inlet air requirement liters	60	120	210	245
Recommended compressor air inlet	120	240	420	490
Pressure drop barg (psig)	1.5 (22)			
Inlet air quality	Clean dry compressed air ISO8573-1:2010 Class 1.2.1			
Technology	Membrane			
Warm up time (minutes)	None			
Electrical supply	None			
Noise level	None			
Dimensions mm (in)	348W x 735H x 350D (13.7W x 29H x 20.8D)	480W x 1300H x 300D (18.9W x 51H x 11.8D)		
Weight kg (lbs)	8 (17.6)	15 (33)	18 (40)	20 (44)
Shipping dimensions mm (in)	890W x 445H x 3530D (35W x 17.5H x 20.8D)	1600 W x 400H x 590D (63W x 15.7H x 23.2D)		
Shipping weight kg (lbs)	14 (31)	22 (49)	27 (60)	27 (60)
Operating temp °C (°F)	15 to 35 (59 to 95)			
Inlet connection	3/8" G			
Outlet connection	1/4" Compression			
Certification	CE			
OPTIONS				
	None	10 liter tank, 10 mt. tube, special 100% Teflon tubing		

MINI WHISPER

DB-MWN2-10

WHISPER 0-40

DB-WN2-0-40

WHISPER 0-80

DB-WN2-0-80

WHISPER 0-120

DB-WN2-0-120