

HiQ® specialty gas generators. The nitrogen LC/MS 4 series.

Nitrogen is commonly used in laboratories for different applications. Some demand higher purities, others are less purity-dependent. Such applications are typically nebulizing gas for liquid chromatography coupled with mass spectrometry (LC/MS) or evaporative light-scattering detectors (ELSD). These are typically used for polymer identification/determination, protein and peptide analysis/identification and in pharmaceutical research and development. Other areas of application are specific solvent evaporations and low-purity purge gas requirements.



Description

The HiQ® LC/MS 4 laboratory nitrogen generator is specifically designed to deliver larger capacity flow rates required for LC/MS 4 instrument operation. The generator is a stand-alone unit that makes pure nitrogen out of ambient air. The system is built around an integral membrane system and oil-free direct drive compressors that deliver a continuous stream of pure, dry nitrogen. The system can deliver flow rates from 1 to 30 NI/m, with purities ranging from 96 % to 99.9 %. For optimal floor mobility, the units are equipped with self-locking caster wheels.

The built-in air compressor (stage 1) compresses the air up to 3.0 bar. The first membrane tube removes the moisture and most of the oxygen together with other gases like CO₂ (etc.). The permeate from the first membrane tube is released back into the atmosphere. The pre-cleaned air then passes on to the 2nd and 3rd membrane tube where nitrogen with a purity higher than 98 % is separated. The permeate from membrane tubes 2 and 3, which is moisture-free and reduced in oxygen content, is collected and recycled back to the inlet of the low-pressure pump.

The pure nitrogen collected after tube 3 is then boosted by a second compressor (stage 2) from 3.0 bar g to 8.5 bar g (45 psi g to 120 psi g), which is the outlet pressure specification.

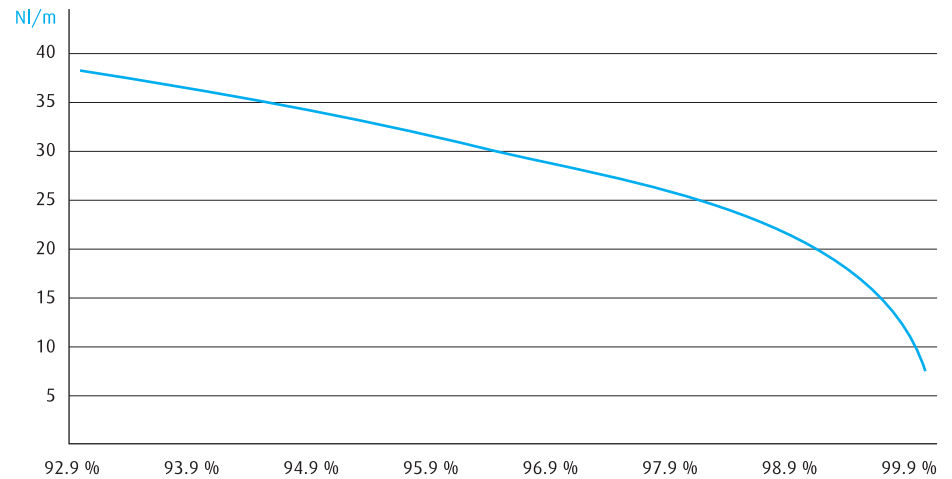
This unique air treatment and compressor management in the HiQ® LC/MS 4 laboratory nitrogen generator guarantees a long lifetime for all vital components.

Advantages


- Flow control valve allows variable flow rates and nitrogen purity levels
- Pressure indication provided for nitrogen supply outlet
- Integral oxygen sensor monitors purity
- Standard integral oil-free direct drive air compressor for turnkey operation
- Self-locking caster wheels provide mobility for installation

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LC/MS 4 generator flow/purity graph



Specifications

Max. N ₂ flow rate:	15–28 l/min (adjustable)
N ₂ purity:	99–98 % (adjustable)
Minimum N ₂ purity:	98 %
Delivery pressure:	8.5 bar g/120 psi g
Flow indication:	Yes
Pressure gauge:	Yes
Built-in compressor:	Yes
Built-in oxygen sensor:	Yes
Air quality:	Normal, clean ambient air, relative humidity < 90 %
Temperature range:	10–35 °C
Connection:	G ¼ / ¼ NPT
Noise level:	< 58 dB(A)
Electrical supply:	230 V/50 Hz 120 V/60 Hz 100 V/50–60 Hz
Power consumption:	900 W
Dimensions:	310 x 900 x 700 mm (W x D x H) 12.2 x 35.4 x 27.6 " (W x D x H)
Net weight:	92.5 kg/204 lbs
Shipping weight:	125 kg/275 lbs
Flow capacity:	10–30 NI/m
Certification:	CE Compliant 
Warranty:	2 years or 8,000 hours of operation (whichever occurs first)

Model

Model	HiQ® code	Description
LCMS-N2-4	5535	LC/MS nitrogen generator with compressors

Spare parts

Model	HiQ® code	Description
LCMS-4-AK	5536	Annual maintenance kit for LC/MS nitrogen generator with compressors
LCMS-4-O2S	5537	Oxygen sensor for LC/MS nitrogen generator with compressors



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