

Ultra-High Purity Helium (BHe/LHe) Supply Systems

He



There are two supply options available for ultra-high purity helium:

1. Gas — Gaseous product is supplied directly via tube trailers or into hydril tubes.
2. Liquid — UHP product is supplied in cryogenic storage vessel.



Both options can include downstream purification.

Purity Information

		High Purity Gas (ppm)	Liquid (ppb)	Purified (ppb)
Helium	guaranteed %	99.999	99.999996	99.999999
Carbon Monoxide	guaranteed	<2*	<1	<1
Carbon Dioxide	guaranteed	N/A	<1	<1
Hydrogen	guaranteed	<1	<1	<1
Moisture	guaranteed	<1	<5**	<1
Nitrogen	guaranteed	<5	<1	<1
Oxygen	guaranteed	<1	<1	<1
THC	guaranteed	<1	<1	<1

* Includes Carbon Dioxide

**Moisture level will approach 1ppb after system drydown.

Certificate of Analysis

Available upon request for delivered product

- Ensures product purity
- Provided with each trailer/tank
- Measures each contaminant based on LOD of analyzers

System Information

GAS

Tube Trailers

- 42,000–180,000 scf capacity
- 3,000 psig MAWP
- Can be both a supply vehicle and an on site storage solution

Hydril Tubes

- 2,450 psig MAWP
- 23,000 scf storage modules

Tube Trailer Discharge Stanchion

- 4,000 scfh/3,000 psig MAWP
- 316L electropolished SS tubing/fittings
- Orbital welding

Tube Manifold

- 3000 psig MAWP
- 316L electropolished SS tubing/fittings
- Orbital welding

High Pressure Control Manifold (HPCM)

- Regulates pressure up to 250 psig
- 316L electropolished SS tubing/fittings
- Orbital welding

Filter Manifold

- 316L electropolished SS
- Removes particles
- Double purge port isolation valve
- Two 100% parallel filters

Purifier

- Palladium tube membrane / zirconium getter
- 100 to 7,000 scfh
- PLC controlled
- 316L electropolished SS tubing/fittings
- Bellows/Diaphragm valves
- Flowmeter/Totalizer

LIQUID

Liquid Helium Tank

- 3,400 to 11,000 gal capacity
- 304 SS Inner vessel and internal piping
- Evacuated multi-layer insulation with cryogenic cooled shields

Pressure Control Filter Manifold (PCFM)

- 53,000 scfh maximum
- 316L electropolished SS
- Regulates pressure/removes particles
- Two 100% parallel filters
- Double purge port isolation valve

The equipment set described above is Air Products' recommended solution for UHP gas supply. Customers who prefer to utilize the standard grade (i.e. copper/bronze) supply systems may incorporate a downstream purifier in order to improve product purity.

Additional Information

For additional information on Helium, or any of our other UHP product offerings, please contact:

tell me more
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