

HIGH-PURITY AIR FOR DEMANDING INDUSTRIAL AND MEDICAL NEEDS

BREATHING AIR PURIFICATION SYSTEMS





BREATHE EASY WITH CONFIDENCE

In critical environments – whether on the factory floor or in a hospital ward – the quality of breathing air can never be left to chance. Purified air protects the health of workers and patients, reduces risk, and supports compliance with the most stringent purity standards. From oxygen levels to trace impurities like carbon monoxide, oil, and water vapor, every detail matters.

Donaldson breathing air purification systems are built for industries where ultra-clean, dry compressed air is vital – not just for regulatory compliance, but for the safety, performance, and productivity of people and processes.

Wherever clean air is critical, our systems are designed to deliver dependable purity – breath after breath.

Where Clean Air Means Business

Donaldson breathing air purification solutions support a wide range of demanding applications, including:

- + [Medical Air Supply](#) – Clean, breathable air supporting patient safety
- + [Welding Operations](#) – Helping protect workers in fume-heavy environments
- + [Safe Solvent Handling](#) – Decanting organic liquids without inhalation risks
- + [Tank & Container Cleaning](#) – Breathing protection in confined spaces
- + [Spray Painting](#) – Clean air for precision and protection
- + [Dry Ice Blasting](#) – Shielding workers from airborne contaminants
- + [Sandblasting](#) – Reliable respiratory protection under extreme conditions
- + [Laboratory Environments](#) – Clean air during chemical handling and research
- + [Breathing Air Cylinder Filling](#) – Supporting purity and compliance



Ultrasure Breathing Air Purification Packages

Five Stages. One Seamless System.

The Ultrasure Smart ALG and Ultrasure HL ALG breathing air purification packages combine advanced filtration and adsorption technologies in compact, modular systems

1. Pre-Filtration with UltraPleat™ Media Technology – Removes coarse and fine solid particles, oil aerosols, and moisture to protect downstream components.
2. Drying Stage – Utilizes adsorption technology to reduce water vapor and achieve a low pressure dew point. Reduces the levels of carbon dioxide, sulfur dioxide, and nitrogen oxides.
3. Activated Carbon Adsorption – Removes oil vapor, hydrocarbons, and odors for enhanced air purity.
4. OX Catalyst – Converts carbon monoxide (CO) into carbon dioxide (CO₂), meeting strict breathing standards.
5. After-Filtration with UltraPleat™ Media Technology – Captures any remaining particles released from previous stages, providing purified air at the point of use.

Ultrasure Smart ALG breathing air systems, with a flow range from 5 to 100 m³/h / 3 to 60 scfm at 7 bar g / 100 psig.



Ultrasure HL ALG systems are designed to consistently provide purified breathing air in a flow range from 100 to 1,000 m³/h / 60 to 600 scfm at 7 bar g / 100 psig.

The Ultrasure series build on proven Ultrapac™ adsorption dryer technology, delivering the same best-in-class performance and key features, including:

- + Stable pressure dewpoints: -70°C / -100°F at 70% load, -40°C / -40°F at 100% load.
- + Ultraeconomy dewpoint control (Superplus) supports better utilization of desiccant capacity by adjusting cycle times.
- + All silicone-free materials for silicone-free breathing air.
- + High efficiency with low consumption of regeneration air.
- + Designed for quick and easy service and maintenance.

Certified purity. Proven performance. Peace of mind built in.

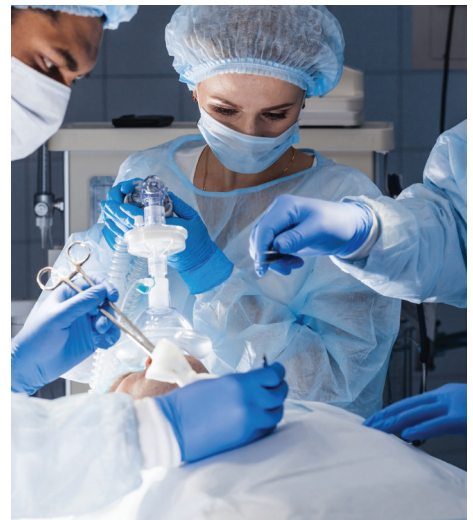
Ultrasure breathing air systems have been independently tested and certified to not only meet – but exceed – international standards for air quality, including those defined by the European Pharmacopoeia. Monograph 1238 outlines strict limits for oxygen content, carbon dioxide, carbon monoxide, sulfur dioxide, nitrogen oxides, oil, and water vapor. Meeting these standards enhances workplace safety, regulatory compliance, and operational efficiency.

FROM CENTRAL AIR SUPPLY TO POINT OF BREATH

Donaldson breathing air purification systems integrate seamlessly into your central compressed air supply – delivering clean air exactly where it's needed. Proven in the field. Trusted across industries.

DF Filter with condensate drain

Ultrapure Smart ALG breathing air system



Ultrasep US Oil-Water Separator



For more information on our breathing air systems, or for help identifying the right solution for your application, contact your local Donaldson representative.



[donaldson.com](https://www.donaldson.com)

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