

LION TOTALCARE REDZONESM CO₂ CLEANING

Redefining Excellence at Every Step

LION's advanced cleaning goes above and beyond conventional cleaning methods, removing, on average, 98% of the most harmful contaminants to PPE gear without relying on water and without using the harsh chemicals and substances other methods typically use.



How We're Different

With **state-of-the-art machinery and patented technology**, our cleaning process is equipped with a high-pressure, proprietary pump that enables constant cleaning of the liquid CO₂ during the wash cycle, allowing for deeper penetration with a two-stage filtration process that removes ≥ 5 microns* and ensures cleanliness.

** talcum powder particle size equivalent*



How It Works

- Uses liquid Carbon Dioxide (CO₂) as its main cleaning fluid, with no more than 2% (by volume) of additives or detergents
- Doesn't require the use of a vacuum pump for distillation or vessel evacuation, eliminating the risk of cross contamination between loads
- Uses purified CO₂ for each bath—a typical cycle for advanced cleaning consists of 4 baths
- Circulates high volumes of liquid CO₂ from the cleaning vessel and through a filter, enabling constant cleaning of liquid CO₂ during each wash cycle



Satisfied Customers

U.S. fire departments using RedZone CO₂ cleaning include:

- Marin County (CA) Fire Department
- Houston (TX) Fire Rescue
- Boulder (CO) Fire Rescue
- Orange County (CA) Fire Authority
- Loudoun County (VA) Fire Rescue
- Jacksonville (FL) Fire and Rescue Department
- And more



We're helping our departments better protect their firefighters and also preserve valuable resources.

– Mark Smith, CEO, LION Safety Solutions

Other Notable Facts

Extended gear life and cost savings due to reduced gear condemnation.

In 2024, RedZone CO₂ cleaning **saved over \$750K** of gear in the U.S. from being condemned.

Reclamation, purification and **reuse of 95% of sourced CO₂ from local ethanol and ammonia production facilities.**

CO₂ that goes through the cleaning vessel is captured back into our system and reused on the next cycles, leaving **only 5% of the CO₂ unclaimed.**

Does not use water—**the CO₂ molecular structure is 1/10th the size of a water molecule.**

This enables penetration through PPE, ensures cleanliness and leaves garments fully dry when finished.

Let's Talk Sustainability

For more information, visit <https://www.lionprotects.com/redzoneco2>

