

Product Sheet

Conformable Compressed Gas Storage System



Product Facts

- High-pressure, safe, light-weight conformable gas storage and delivery system for all compressed gasses – natural gas, air, oxygen, hydrogen, nitrogen
- Construction: Polymer liner, woven synthetic fiber reinforcement, and protective outer shell
- Working pressure: 350-bar with 700-bar milestone under development
- Industries: Transportation (light and heavy duty), Defense, Industrial Gas, Aviation, and Marine

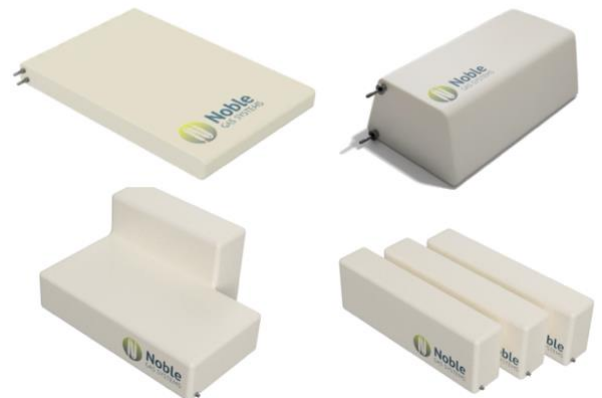
Key Benefits

- Conformability –packaging envelope flexibility
- Improved safety
- Lower weight
- Reduced cost
- Efficient, scalable manufacturing process

Product Overview

The Conformable Compressed Gas Storage System developed by Noble Gas System is the future of gas storage and delivery. It is a safe, light-weight compressed gas pressure vessel that can be integrated into existing vehicle architectures. The industry-leading system provides more capacity and are lighter weight than traditional Type 4 Carbon Overwrap Pressure Vessel (COPV) cylinders and currently meets burst and hydrogen permeation requirements for 350-bar working pressures. Additionally, the leak-before-burst failure mode of this design eliminates the opportunity for a catastrophic, instantaneous release of high-pressure gas, making it a safer alternative.

The system can be fabricated in a variety of shapes and sizes to be easily integrated into existing product configurations, such as electric vehicle battery compartments or the tight spaces within unmanned aerial vehicles.



Marketplace Implications

Globally, the transportation industry is being challenged to develop low- and zero-emission solutions due to government regulations and consumer demand. Hydrogen fuel cell as an enabling technology allows vehicles to achieve zero emission requirements while better addressing requirements such as range, duty cycle and refueling speed. The Conformable Compressed Gas Storage System tackles the storage challenge, efficiently and safely storing compressed hydrogen fuel onboard a vehicle without impacting passenger or cargo space.