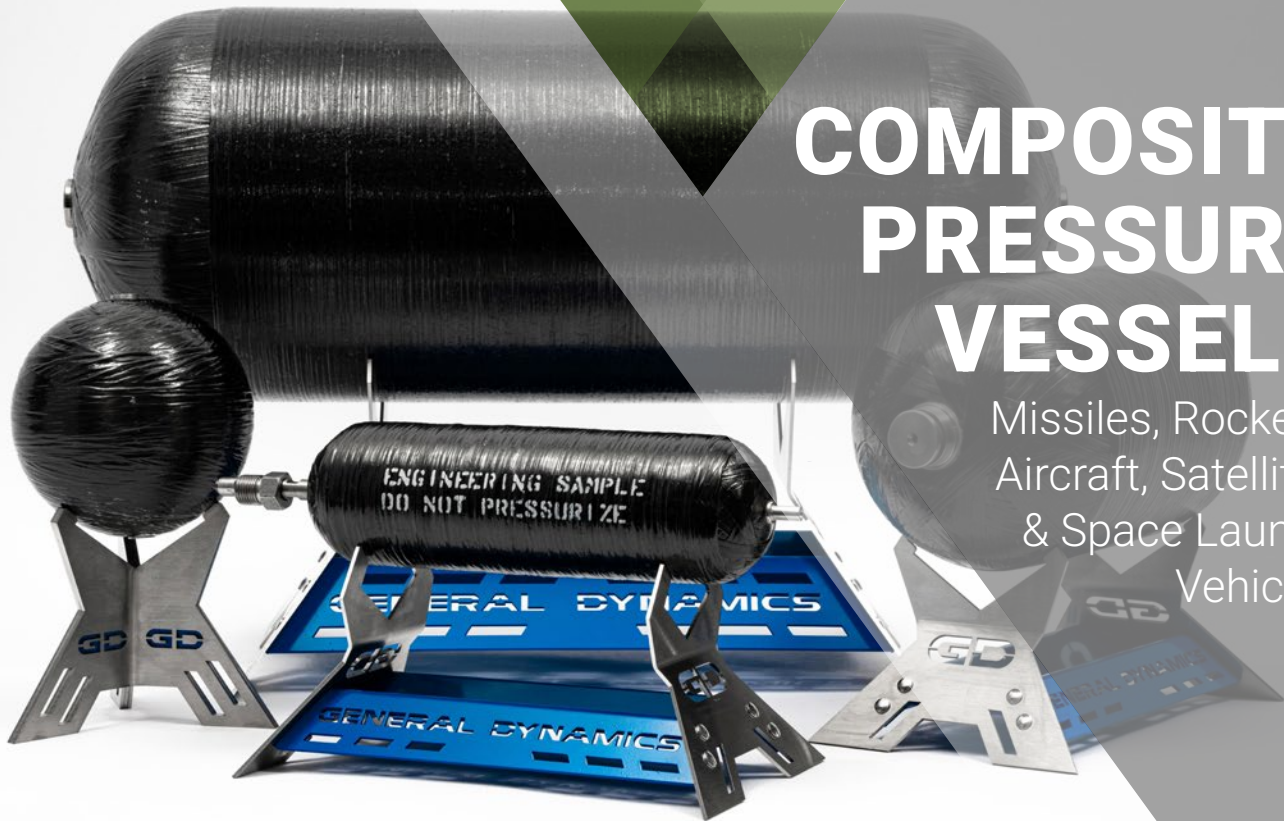


COMPOSITE PRESSURE VESSELS

Missiles, Rockets,
Aircraft, Satellites
& Space Launch
Vehicles



COMPOSITE AEROSPACE STRUCTURES

COMPOSITE STRUCTURES

LIGHTWEIGHT COMPOSITE OVERWRAPPED PRESSURE VESSELS (COPV)

General Dynamics Ordnance and Tactical Systems has extensive experience in the design, development, qualification and integration of lightweight composite overwrapped pressure vessels for aircraft, satellite, launch vehicle and missile platforms.

Our pressure vessels combine a permeation barrier (liner) with a filament-wound outer shell. The liners are made from a wide variety of materials depending on customer requirements in order to optimize the design while maintaining cost objectives. Materials can include aluminum, corrosion-resistant steel (CRES), Inconel®, titanium and thermoplastic.



Space Launch System & Orion Crew Module

Photo courtesy of NASA © 2022

COMPOSITE PRESSURE VESSELS

Missiles, Rockets, Aircraft, Satellites
& Space Launch Vehicles



Pressure vessels range in size and shape to suit a wide variety of customer needs. Notable programs supported include the Artemis Missions, the International Space Station, Skylab, Space Shuttle Missions, and various missile and satellite platforms.



Fast Facts

PLATFORMS

- » Spacecraft
- » Aircraft
- » Satellites
- » Launch Vehicles
- » Missiles

APPLICATIONS

- » Military and Commercial Aircraft Flotation and Emergency Power
- » Missile Control
- » Space Launch Platforms
- » Satellite Propulsion Systems
- » Life Support
- » Aircraft Countermeasures

DESIGN, ANALYSIS AND PRODUCTION PROCESSES

- » Filament Winding
- » Hydrostatic Proof Testing
- » Thin Wall Welding
- » Complete Tool Design
- » Precision-Machining
- » Manufacture to Performance Specifications