Orbital Technologies Corporation (ORBITEC) is a wholly-owned subsidiary of aerospace and defense company Sierra Nevada Corporation (SNC). Based in Madison, Wisconsin, ORBITEC has nearly 30 years of experience developing state-of-the-art aerospace and high technology products in cost-sensitive markets. As an ISO9001 and AS9100 certified company, ORBITEC is committed to creating, developing, demonstrating and deploying innovative technologies across multiple industries ensuring customer satisfaction with low-risk and cost effective solutions.
ORBITEC is focused on the development and demonstration of innovative, low-cost, full rocket engine solutions, components for liquid and hybrid propulsion systems, including the patented “VORTEX” Combustion Engines for boost, upper stage and in-space thrust control applications.

ORBITEC is dedicated to creating the next generation of bio-agricultural products through system and service solutions that increase plant productivity on Earth and in space with dramatic operational cost savings. Our systems are optimized for growth of plant-made pharmaceuticals, industrial products and high-yield crops through lighting, control systems, automation and growth services. These fully-controlled and closed systems have ability to efficiently “manufacture” both common and unique bio-based products.

ORBITEC offers a full complement of life support and thermal control systems that can be specifically tuned for shorter duration human and cargo transit to near-closed systems that recycle resources for longer duration habitation. These systems, subsystems and components build on years of company experience and spaceflight heritage with closed human environments for space travel, including decades of experience perfecting plant growth systems for science and life support applications. Complete systems are available for air and water processing, environment and thermal control, food production, waste management, cabin instrumentation, space system and spacecraft lighting and science/payload operations.

HMA Fire, a wholly-owned subsidiary of SNC, produces industry-leading Ultra-High Pressure (UHP) high-mobility fire apparatus that extinguishes fire in half the time using a third of the water of conventional suppression systems. We offer superior capabilities for small, mid-size and large applications for vehicle, structural, chemical and wildland fires. These systems are especially valuable in water-limited situations where high performance is needed with high-mobility.

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Full propulsion systems; variety of propellants
- In-space propulsion (0.1 to 1,000 lbf thrust)
- Upper stage engines (to 100,000 lbf thrust)
- Boost stage engines (in development)
- Advanced propellants and thrusters
- O2 and H2 production from water
- O2 and H2O production from planetary resources

BioProduction Systems
- Controlled BioProduction systems (>BSL2)
- Specialty culture and root support systems
- Efficient food production systems
- Specialty BioProduction systems
- Full-sun and specialty LED lighting systems
- Spider silk & protein molecule production

Ultra-High Pressure Fire Suppression Systems
- Portable UHP systems for your vehicle
- Portable UHP systems in off-road vehicles
- UHP systems for small/large trucks
- UHP systems for ambulance and other system
- Drop-in UHP systems for fire fighting vehicles
- Large turret and high volume UHP systems

Environmental Control, Life Support Systems
- Air revitalization and CO2 removal
- Temperature and humidity control
- Water reclamation and processing
- Pressure/atmospheric composition control
- Food production
- Bioregenerative air and water systems
- Air/water quality monitoring and control
- Waste processing and management
- Environmental LED lighting

Thermal Systems
- Vehicle/system thermal transport
- Integrated heat exchangers and cold plates
- In-space thermal management to radiators
- Phase change and sublimator systems

Science and Payload Systems
- Plant systems
- Animal systems
- Waste processing/compaction
- Microbial monitoring
- Zero-g mass measurement
- Sanitation systems