

NEWSPACE MARKET · COMPANY PROFILE



Element Defense

United States · founded 1961 · elementdefense.com

8

PRODUCTS

2

SERVICES

newspacemarket.com/companies/element-defense-formerly-element-materials/ as of 20 August 2026

Element Defense

Element U.S. Space & Defense (formerly NTS Technical Systems) is a leading testing, inspection, and certification partner for NASA, the U.S. Department of Defense, and prominent aerospace and defense industry leaders. With more than 60 years of experience dating back to 1961, the company specializes in environmental simulations, EMI/EMC testing, dynamics, hydraulics, ballistics, vibration testing, and centrifuge testing for the most complex programs in the world. Operating six specialized facilities across the United States, Element Defense has achieved CMMC Level 2 Certification and holds internationally recognized accreditations for mission-critical testing services.

This profile is generated from the live NewSpace Market catalogue. Specifications are as published by the manufacturer; every product links to a page where a request for quotation reaches the company directly.

Services

Ballistics Testing Services

The company provides ballistics testing for materials, components, and systems using various ammunition types, utilizing indoor and outdoor firing ranges.

Industrial X-ray and Computed Tomography Imaging

The company offers advanced industrial X-ray and computed tomography imaging solutions to provide detailed 3D views of internal components of materials and products.

Product catalogue

ELEMENT DEFENSE

Advanced Materials Testing for Space

Element Defense's materials qualification testing services for aerospace and space — structural testing, NDT, and materials characterization for satellite and launch vehicle hardwa

Tests	Tensile, fatigue, fracture mechanics, cryogenic, thermal cycling, radiation
NDT Methods	Ultrasonic, X-ray, CT scanning for internal defect detection
Space Hardware	Satellite structures, composite panels, weld specimens, pressure vessels
Standards	NASA-STD-5001, MIL-HDBK-17, ESA structural qualification
Locations	US, UK, Europe (multiple laboratories)

price on request



ELEMENT DEFENSE

Dynamics Testing Services

Element U.S. Space & Defense offers a comprehensive suite of dynamics testing services, including acceleration, acoustic noise, bird impact, vibration, corrosion, thermal shock

Acceleration Test Centrifuge Diameter	1ft (0.3m) to 62 ft (16m)
Acceleration Test Weight Capacity	a few grams to 7,000 lbs (3,175kg)
Acoustic Noise Test Reverb Chamber Volume	5,000 cubic foot
Acoustic Noise Test Clean Room Size	1,400 square foot High Bay Class 100k
Bird Impact Test Bird Weight Range	2.2 to 8-pound
Bird Impact Test Speed	as fast as 400 mph
Vibration Test Force Pounds (Tandem Shakers)	up to 70,000 force pounds

price on request

ELEMENT DEFENSE

EMI/EMC Testing Services

Element Defense provides comprehensive EMI/EMC testing and engineering services, including radiated susceptibility, magnetic susceptibility, HIRF, lightning effects, and electrosta

Radiated Susceptibility	up to 200V/m, 10kHz to 40GHz
Magnetic Susceptibility	dc to 100 kHz
HIRF Testing	400 MHz to 18 GHz
Indirect Lightning	to 10 kV/10 kA
Lightning Waveforms	per SAE ARP 5416, D0-160, Airbus and Boeing specifications
ESD Network Models	up to +/- 30 kV contact and Air discharges
ESD Vertical Lift Simulation	300 kV

price on request



ELEMENT DEFENSE

Environmental Simulation Testing

Environmental simulation testing by Element U.S. Space & Defense focuses on preparing products for their anticipated operational environments by subjecting them to simulated co

price on request



ELEMENT DEFENSE

Hydraulics Testing Services

Element U.S. Space & Defense offers comprehensive hydraulics testing services for fluid power systems and components, ensuring reliability and longevity under simulated field conditions.

price on request



ELEMENT DEFENSE

Mechanical Shock Testing

Element U.S. Space & Defense offers mechanical shock testing services, including thermal shock and vibration testing, to assess device response to extreme acceleration, deceleration, and shock.

price on request

ELEMENT DEFENSE

Munitions Testing

Element U.S. Space & Defense's Camden, Arkansas facility is an ITAR-registered, highly responsive advanced ordnance test and evaluation facility. It supports munitions testing and evaluation services.

price on request



ELEMENT DEFENSE

Pneumatic Testing Services

Element U.S. Space & Defense offers robust pneumatic testing services at its Santa Clarita, CA facility, designed for air flow, pressure, and temperature management subsystems.

price on request

Contact Element Defense

Open the company profile on NewSpace Market to see full specifications and datasheets, and to send a request for quotation that reaches the manufacturer directly.

<https://newspacemarket.com/companies/element-defense-formerly-element-materials/>

<https://www.elementdefense.com/>

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