

ADVANCED WARHEAD TECHNOLOGY

Capabilities Overview

MISSILE SUBSYSTEMS | WARHEADS AND PAYLOADS

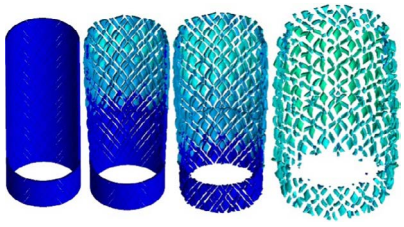
General Dynamics Ordnance and Tactical Systems offers a variety of strengths, services, and hardware that advances the state-of-the-art in warhead technology. We specialize in next generation blast and fragmenting warheads, shaped charged warheads, and warheads with multimode effects. These weapons are achieved through world-class modeling and simulation, advanced designs to development, testing and qualification, and finally, production. With concepts to hardware capability, we work to enhance the warfighter's effectiveness.

NEXT GENERATION BLAST AND FRAGMENTING WARHEADS

Blast and fragmentation warheads destroy soft targets while protecting military assets and personnel with Insensitive Munitions (IM) features.

WORLD-CLASS SHAPED CHARGE WARHEADS

Advanced shaped charge warheads offer improved anti-armor performance in a more compact package, creating space for additional weapon system features, including IM features and soft target effectiveness.



BLAST FRAGMENTATION DESIGN

MULTIMODE EFFECT WARHEADS

Advanced Multimode warheads combined shaped charge and blast fragmentation technology, offering full advantage to the warfighter against multiple targets.

- Anti-Armor, Materiel and Personnel
- Military Operations in Urban Terrain (MOUT) structures

MODELING AND SIMULATION

We offer a full array of hydrocode, finite element and lethality system effectiveness modeling and simulation to develop warhead concepts that deliver maximum lethality against a wide array of targets including fixed, mobile, hardened, and buried.

DESIGN ELEMENTS

- Structural Analysis, Including Finite Element Modeling
- Explosive Trade Studies
- Solid Modeling
- Platform Integration
- Technical Data Packages

ADVANCED SHOCK PHYSICS MODELING

- Detonation/Deflagration/Blast
- Explosively Formed Penetrators (EFP) - Shaped Charges
- Blast/Fragmentation
- Reactive Materials
- Geological/Non-Geological Penetration

TESTING ARENAS

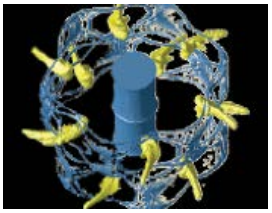
- Insensitive Munition
- Water Tank
- Armor Penetration
- X-Ray
- Fragmentation Characterization
- Ballistic Testing
- Environmental Conditioning

SYSTEM EFFECTIVENESS ANALYSIS

- System Integration and Design
- Insensitive Munition (IM)
- Target Engagement
- Lethality



BLAST FRAGMENTATION



MULTIPLE EFP



MULTIMODE EFFECTS



ARMOR PENETRATION

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