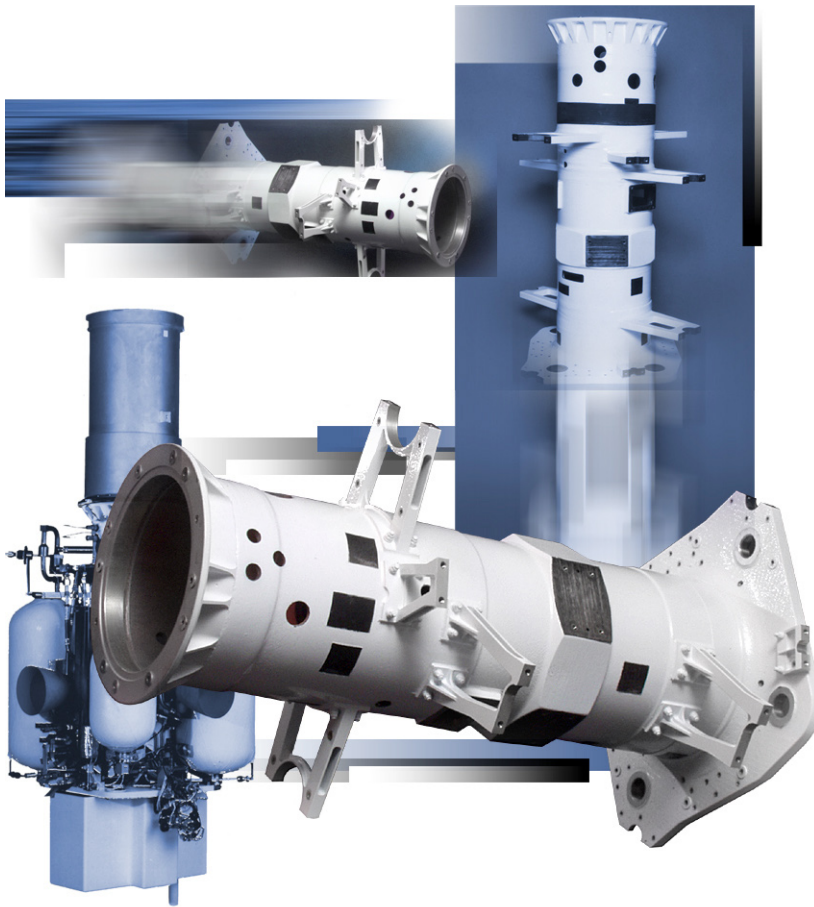


EKV Main Structure

exoatmospheric kill vehicle



General Dynamics Armament and Technical Products produces the main structure for the Exoatmospheric Kill Vehicle, a critical component of the Ground-based Midcourse Defense program within the Missile Defense Agency.

The EKV's primary mission is to provide protection against missile attacks by engaging high-speed ballistic missile warheads, otherwise known as reentry vehicles, in the midcourse or exoatmospheric phase of their trajectories. The EKV destroys the threat using only force of impact.

Key features of the main structure include:

- Hand lay-up composite IMU bulkhead with aluminum core.
- The filament wound main tube is approximately 7.5 inches in diameter by 25.7 inches long.
- Octagon thrust pad region is filament wound, machined and over wrapped.
- Aluminum coating applied by ion vapor deposition or thermal spray.
- Secondarily bonded aluminum brackets (10) and aluminum forward ring.
- CRES and titanium potted inserts (91), with very tight position tolerances.
- Mounted to the launch vehicle adapter by the large flange on aft end of structure.

Boeing is the prime contractor on the EKV program.

Key Capabilities

- Filament winding of composite structure
- Hand layup with aluminum core
- Precision machining with tight hole/insert positional accuracy
- Secondary aluminum and paint coatings
- Bracket installation with tight positional requirements
- Extensive photographic and engineering documentation throughout fabrication

GENERAL DYNAMICS

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