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Minotaur VI

Space Launch Vehicle

Minotaur VI is an evolutionary version of the flight proven Minotaur IV+ Space Launch Vehicle (SLV), providing a cost-effective and capable space solution for U.S. Government-sponsored spacecraft. The combination of four government-furnished solid rocket stages, a commercial solid rocket upper stage, and Northrop Grumman's flight-proven systems and processes provide unmatched value and performance. The integration of government motors with commercial boosters and state-of-the-art hardware is one of Northrop Grumman's unique strengths that spans several decades of experience.

The Minotaur VI vehicle adds a lower stage to the existing and flight demonstrated Minotaur IV+ vehicle for a significant increase in performance with only a modest increase in cost. The only new structure required is the 1/2 interstage, which is adapted from a heritage flight proven design to minimize risk. For elliptical or high energy missions, a STAR™ 37 upper stage option is available.

The Minotaur family of launch vehicles are provided via the Orbital/Suborbital Program (OSP) and managed by the U.S. Air Force Space and Missile Systems Center (SMC), Launch Enterprise, Experimental Launch and Test Division (LE/LEX), Rocket Systems Launch Program (RSLP) located at Kirtland Air Force Base, New Mexico.

Facts At A Glance

System Features

Full spacecraft integration support, including mission management, spacecraft interface support (power, telemetry, sequencing, attitude control, and deployment), through launch operations and post-launch performance evaluation

Flexible design enables multiple mission tailoring options

Cost effective space launch

Responsive launch solutions available

Mission success is ensured by mature systems and processes

- Northrop Grumman's rigorous mission assurance program
- Full Government insight and independent assessment

Multiple spaceport launch capability (Florida and Alaska) using portable ground support equipment

Performance

System performance assured from extensive booster motor flight history

Cold gas attitude control system readily accommodates a variety of spacecraft mission requirements, including precise separation pointing and post-boost maneuvers

Minotaur VI+ uses the optional STAR™ 37 upper stage to provide up to 200 kg increased performance to LEO and support for HEO missions with the following capability:

- 980 kg to MTO
- 860 kg to GTO
- 560 kg to TLI

Payload Accommodations

Standard 2.34 m (92 in) diameter spacecraft fairing

Optional 2.79 m (110 in) diameter spacecraft fairing available

Mission-specific fairing access doors for spacecraft support

Spacecraft and fairing assembly integrated independently from launch vehicle stages

Well-defined launch environments derived from extensive flight data

Temperature, humidity and cleanliness control through lift-off

Standard 986 mm (38.81 in) diameter bolted interface with optional spacecraft support options

- Single and multiple spacecraft adaptors
- Various flight-proven spacecraft separation systems available, including low-shock designs

Multiple Payload Adapter Fitting (MPAF) option

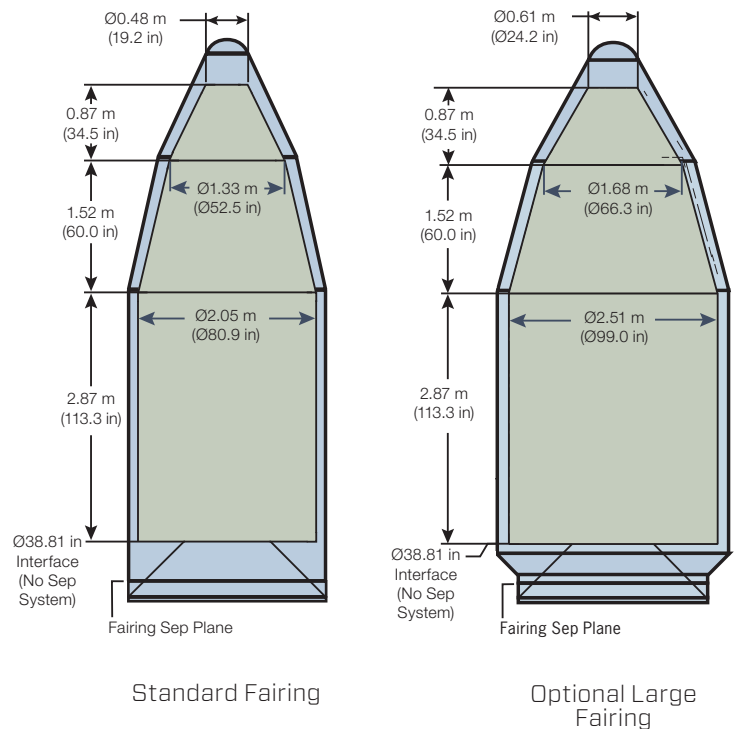
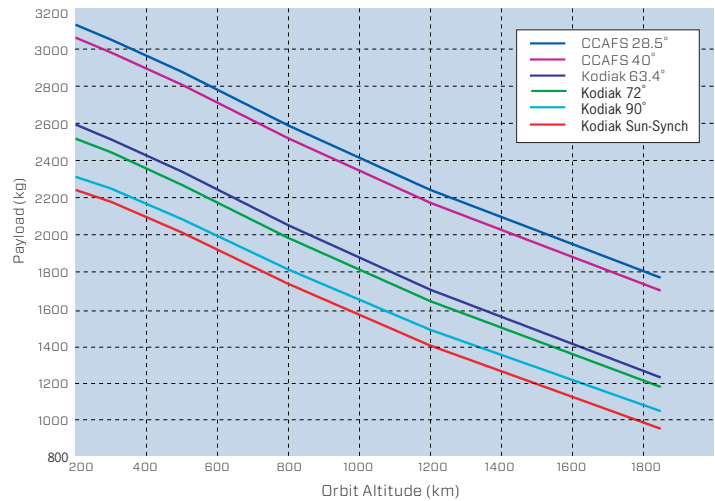
Hydrazine upper stage for multiple orbit altitude capabilities or increased orbital insertion accuracy

More Information

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