United Launch Alliance

Atlas V

ULA—One Team for Assured Access to Space

United Launch Alliance

Atlas® V

A History of Mission Success

The Atlas V family of Evolved Expendable Launch Vehicles (EELV) represents our commitment to enhanced competitive launch services for the U.S. government. Since their debut in August 2002, Atlas V vehicles have achieved 100 percent mission success in launches from Space Launch Complex 41 at Cape Canaveral Air Force Station, Florida. Space Launch Complex 3E at Vandenberg Air Force Base, California, is ready to support Atlas V West-coast launches.

50 Years and Counting

Since 1957, Atlas rockets have protected our nation, sent people into space and led the way in solar system exploration. Built on sequential enhancements, Atlas launch vehicles continue to serve as a reliable partner to the U.S. government.

Modular System for Maximum Flexibility and Reliability

The new generation of Atlas, the Atlas V, is the worthy successor to the 100 percent successful Atlas II and III programs. Built modularly with flight-proven elements, Atlas V has followed a carefully executed program of incremental improvements resulting in 100 percent mission success. Providing our customers maximum flexibility, capability and reliability has been the foundation of the Atlas program, which has logged nearly 600 launches to date.

The Atlas V family of vehicles offers:

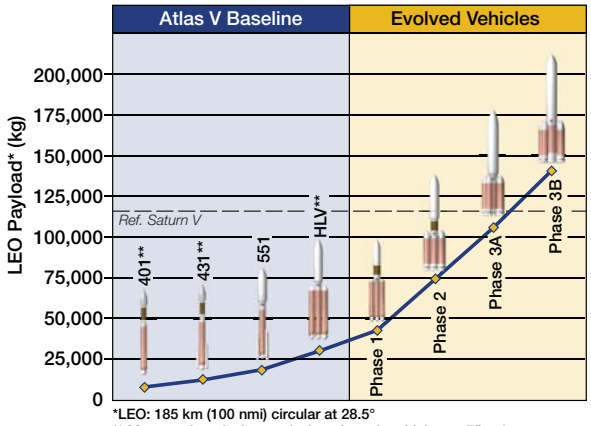
- Significantly enhanced capability by implementing a structurally stable common core booster (CCB) stage powered by an RD-180 engine produced by the RD AMROSS joint venture between Pratt & Whitney of the United States and NPO Energomash of Russia. The RD-180 engine is throttleable over a wide range and develops a liftoff thrust of 3.8 MN (860,000 lbf).
- Provisions for adding up to five Aerojet Atlas V strap-on solid rocket boosters to the common core booster stage. These solid rocket boosters, the largest monolithic solids in the world, enable the Atlas to flexibly and competitively meet varied performance requirements for missions from low-Earth orbit to geosynchronous orbit and beyond.
- A Centaur upper stage configured with either one or two Pratt & Whitney-manufactured RL10 engines to optimally meet various spacecraft mission requirements.
- The option of either a 4.2-meter diameter Atlas-heritage design payload fairing or a 5.4-meter diameter Oerlikon-manufactured payload fairing. Both flight-proven fairings are offered in three lengths to more precisely accommodate customer requirements.

Atlas V Family

	401	431	551	HLV
GTO	4,950 kg (10,900 lb)	7,800 kg (17,190 lb)	8,700 kg (19,180 lb)	13,000 kg (28,660 lb)
LEO	9,750 kg (21,490 lb)	13,620 kg (30,020 lb)	18,500 kg (40,780 lb)	29,420 kg (64,860 lb)

GTO: 35,786 x 185 km (19,323 x 100 nmi) at 27°; LEO: 185 km (100 nmi) circular at 28.5°

Atlas V Performance & Growth Options



*LEO: 185 km (100 nmi) circular at 28.5°
** May require mission analysis or launch vehicle modifications

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