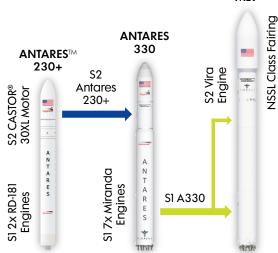


MEDIUM LAUNCH VEHICLE

Firefly Aerospace and Northrop Grumman are co-developing a new medium launch vehicle (MLV) that combines the best flight-proven technologies, systems, and mission experience from both companies.

KEY BENEFITS

- ✓ Fills a void in the underserved medium-lift market.
- Supports commercial, civil, national security, and international launch markets.
- ✓ Delivers to customers' preferred orbits with competitive pricing.
- ✓ Lower cost and increased performance.
- ✓ Provides greater launch schedule availability from Wallops Island.



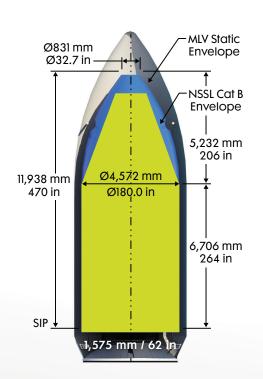
MLV is an evolutionary successor to the Antares launch vehicle, offering a significant leap in power, performance, and payload capacity.





BUILT ON SUCCESS OF ANTARES AND ALPHA





PAYLOAD ACCOMMODATIONS

FAIRING DIAMETER 5.4 m outer diameter
ENVELOPE DIAMETER 4,572 mm/180 in
ENVELOPE HEIGHT 11,938 mm/470 in
INTERFACES Up to 4,000 mm/157 in
STANDARD 1,575 mm, 2,624 mm

MLV offers a 5-meter class payload fairing that can be customized based on customer needs.

WALLOPS LAUNCH PERFORMANCE

PAYLOAD PERFORMANCE

 LEO, 200 KM
 16,300 kg

 GTO
 3,200 kg

 TLI
 2,300 kg

ARCHITECTURE

VEHICLE LENGTH 55.7 m / 182.7 ft

VEHICLE STAGES 2

PROPULSION

PROPELLANT Liquid Oxygen / RP-1

PROPELLANT FEED Turbopump

STAGE 1 ENGINES 7x Miranda

STAGE 1 THRUST 7,161 kN / 1,610,000 lbf (vac)

STAGE 2 ENGINE 1x Vira

STAGE 2 THRUST 890 kN / 200,000 lbf (vac)

17 16 (IW) 15 14 13 LEO 38° LEO 45° LEO 55°

ALTITUDE (KM)

POINTS OF CONTACT

Northrop Grumman Nicole Jordan 425-306-6499 nicole.jordanmartinez@ngc.com

Aaron Prescott 202-834-8312

a aron.prescott@fireflyspace.com





Firefly Aerospace