INTRODUCING HELIOS

FLYING 2026

ACCESS ANY ORBIT

5+ tons from LEO to GEO in under one day.

THE MOST AFFORDABLE RIDE

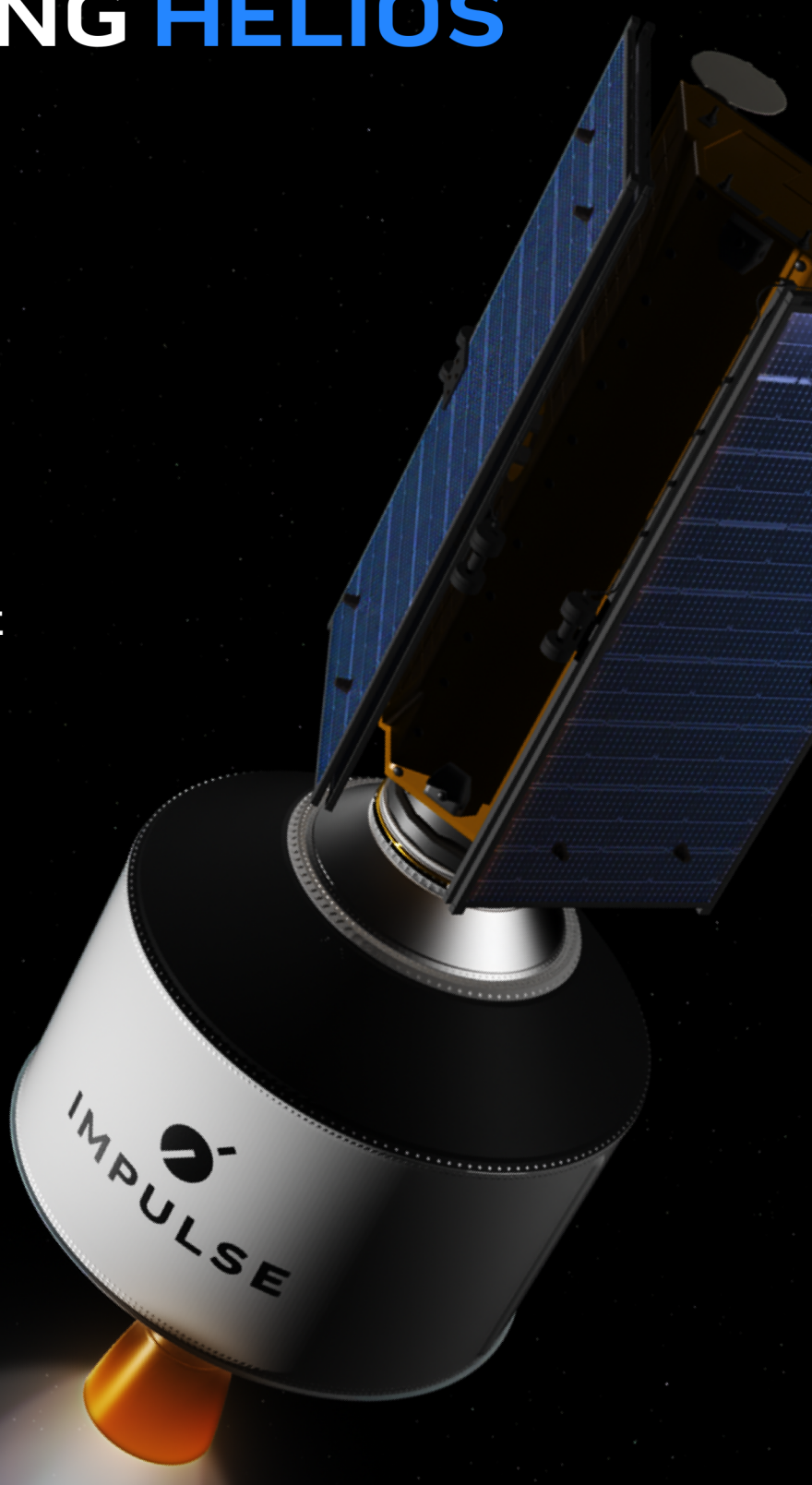
The most economical way to GEO, MEO, the Moon, and Mars when paired with low-cost LEO launch.

A LEGACY OF RELIABILITY

Designed by Tom Mueller, the engineer responsible for the most reliable rocket engine in history.

LAUNCH VEHICLE AGNOSTIC

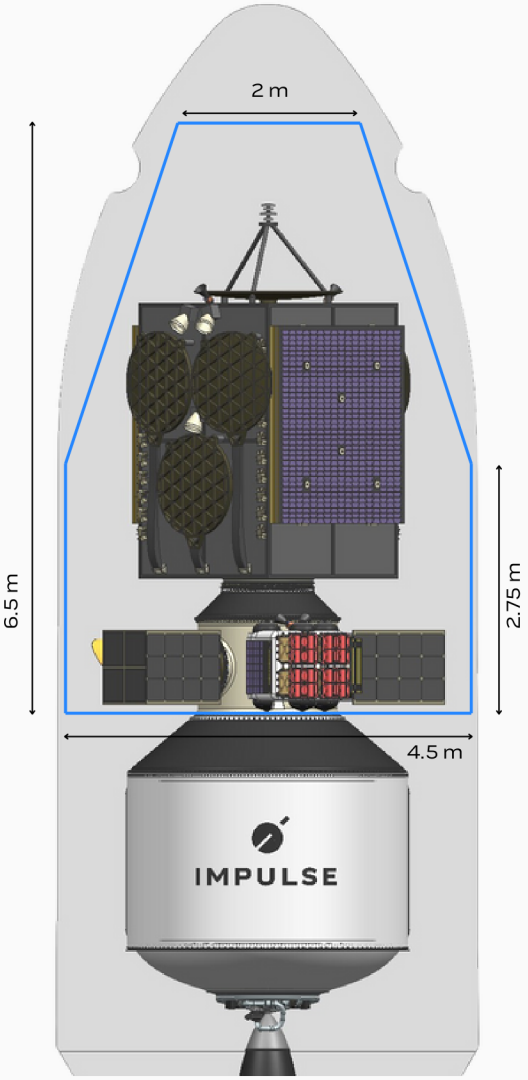
Designed for medium-lift vehicles and the super-heavy future of Starship.



IMPULSE SPACE

HELIOS

Helios is the next generation of high-energy kick stage, economically delivering payloads to GEO and beyond.



SPECIFICATIONS

Serviced Orbits	GEO, GTO, MEO, TLI, Earth Escape
Transfer Duration	< 1 day
Delta-v	3 km/sec to 9+ km/sec
Propulsion	1x Deneb 15,000 lbf (67 kN) engine
Propellant	Liquid Oxygen (O2) and Liquid Methane (CH4)
Attitude Control	RCS thrusters, Main engine gimbal
Vehicle Compatibility	Falcon 9, Falcon Heavy, Starship, Terran R, New Glenn, Vulcan
Payload interface	EELV 62" (1575 mm), ESPA Standard, ESPA Grande, and Custom

PAYLOAD CAPACITY

GEO	4,000 kg*	4,500 kg**
GTO	7,500kg*	10,500 kg**
MEO — 20k km	5,500 kg*	6,500 kg**
TLI (Lunar Transfer)	6,000 kg*	7,500 kg**
Earth Escape	4,500 kg*	5,500 kg**

* Assumes launch to LEO (300 km circular) on SpaceX F9-5500 (Reusable)
** Assumes launch to LEO (300 km circular) on Relativity Terran R (Reusable)

Helios's main engine, Deneb, was designed by Tom Mueller, founding member of SpaceX and creator of the most reliable rocket engine in history, Merlin.

Helios — Flights starting 2026
sales@impulsespace.com

IMPULSE SPACE