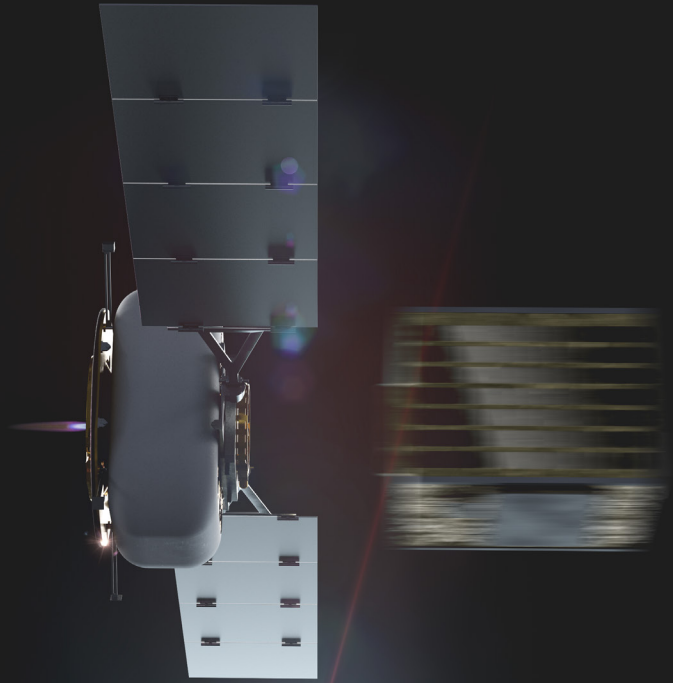




VIGORIDE™ EXTENDED

TRANSPORTATION SERVICE



YOUR CONNECTING FLIGHT IN SPACE

Vigoride Extended is an in-space orbit transfer service for satellites. Once in space, Vigoride Extended delivers your payload its final orbit: as far as Geostationary or even lunar orbit.

Vigoride Extended enables your satellites to be placed exactly where you need them to be in space. The first leg

of the journey is performed by a dedicated small launch vehicle or rideshare via a large rocket. The Vigoride Extended transfer vehicle will then transport your payload to its final destination.

To achieve unprecedented performance, maximum safety, and the lowest cost, Vigoride Extended is powered by Momentus' proprietary water plasma engines. For now, Vigoride Extended is expendable, but future versions will be reusable, capable of serving multiple missions while refueling with water in space.

01

Payload and Vigoride Extended arrive at initial orbit via dedicated launcher or rideshare.

DEDICATED

RIDESHARE

LEO



02

Vigoride Extended and payload travel to drop-off orbit.



03

Payload deployment at drop-off orbit.



GEO



VIGORIDE EXTENDED

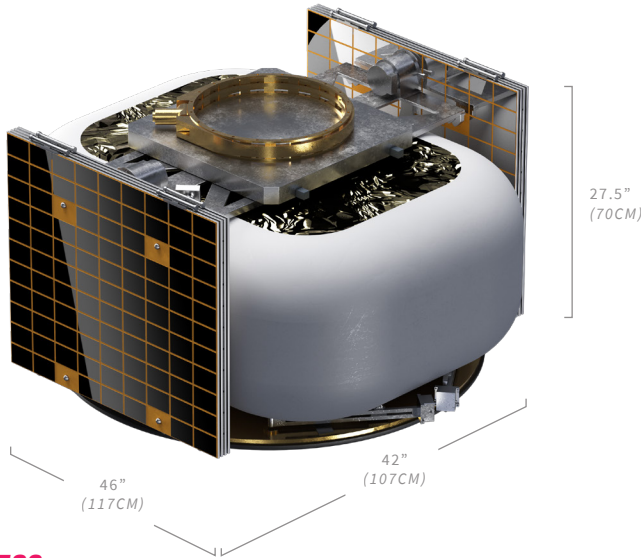


PAYLOAD



VIGORIDE EXTENDED™

TRANSPORTATION SERVICE



VIGORIDE EXTENDED SPECS

WET MASS (WITHOUT PAYLOAD): 450 KG
 MAXIMUM PAYLOAD MASS: 400 KG
 TOTAL IMPULSE: >2,000,000 N-S
 MAXIMUM ΔV: >5 KM/S FOR 100 KG PAYLOAD

WATER-BASED MICROWAVE ELECTROTHERMAL PROPULSION
 3-AXIS STABILIZED WITH ELECTROTHERMAL ATTITUDE CONTROL THRUSTERS



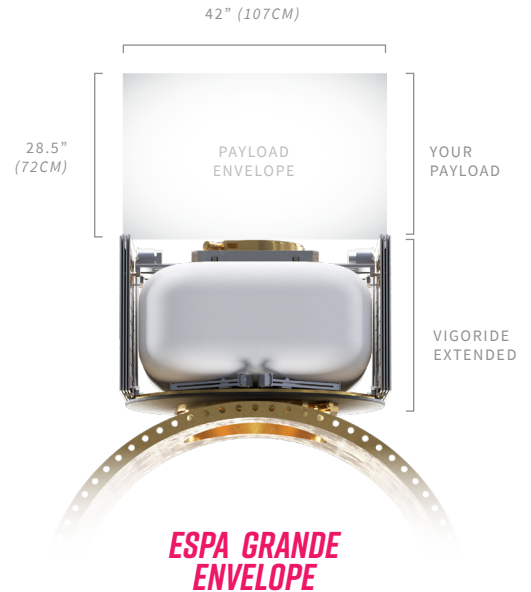
LAUNCH VEHICLE ENVELOPE

DROP-OFF ORBIT	MEDIUM EARTH ORBIT		GEOSTATIONARY ORBIT		LOW LUNAR ORBIT	
	MAXIMUM PAYLOAD KG	TRIP TIME MONTHS	MAXIMUM PAYLOAD KG	TRIP TIME MONTHS	MAXIMUM PAYLOAD KG	TRIP TIME MONTHS
TYPICAL MISSION SCENARIOS	20,000 KM ALTITUDE CIRCULAR ORBIT (MEO)		35,786 KM ALTITUDE CIRCULAR ORBIT (GEO)		100 KM ALT. CIRCULAR ORBIT AROUND THE MOON (LLO)	
INITIAL ORBIT						
LOW EARTH ORBIT 300 KM ALT. CIRCULAR (LEO)	250	4 - 5	200	4 - 5	100	9 - 10
ELLIPTICAL DEPARTURE ORBIT 300 X 7,500 KM	350	3 - 4	300	4 - 5	180	9 - 10
GEOSTATIONARY TRANSFER ORBIT 300 X 35,786 KM	N/A	N/A	400	3 - 4	300	8 - 9

TYPICAL VALUES SHOWN USING 750 KG LAUNCH MASS FOR LOADED VIGORIDE EXTENDED. PERFORMANCE DEPENDS ON INCLINATION.

STANDARD RIDESHARE INTERFACE

PAYLOADS CAN BE ATTACHED TO VIGORIDE EXTENDED USING ANY STANDARD 15" ADAPTER OR SEPARATION MECHANISM. CUSTOM ADAPTER OPTIONS ARE ALSO AVAILABLE.
 STANDARD POWER CONNECTIONS AVAILABLE FOR KEEP-ALIVE OPERATIONS DURING TRANSFER.



ESPA GRANDE ENVELOPE

KEY TECHNICAL ADVANTAGES

- UP TO 3 TIMES FASTER THAN XENON ELECTRIC PROPULSION
- UP TO 2 TIMES THE PAYLOAD DELIVERED AS CHEMICAL PROPULSION
- NON-TOXIC PROPELLANT (100% WATER)

BOOK YOUR RIDE

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