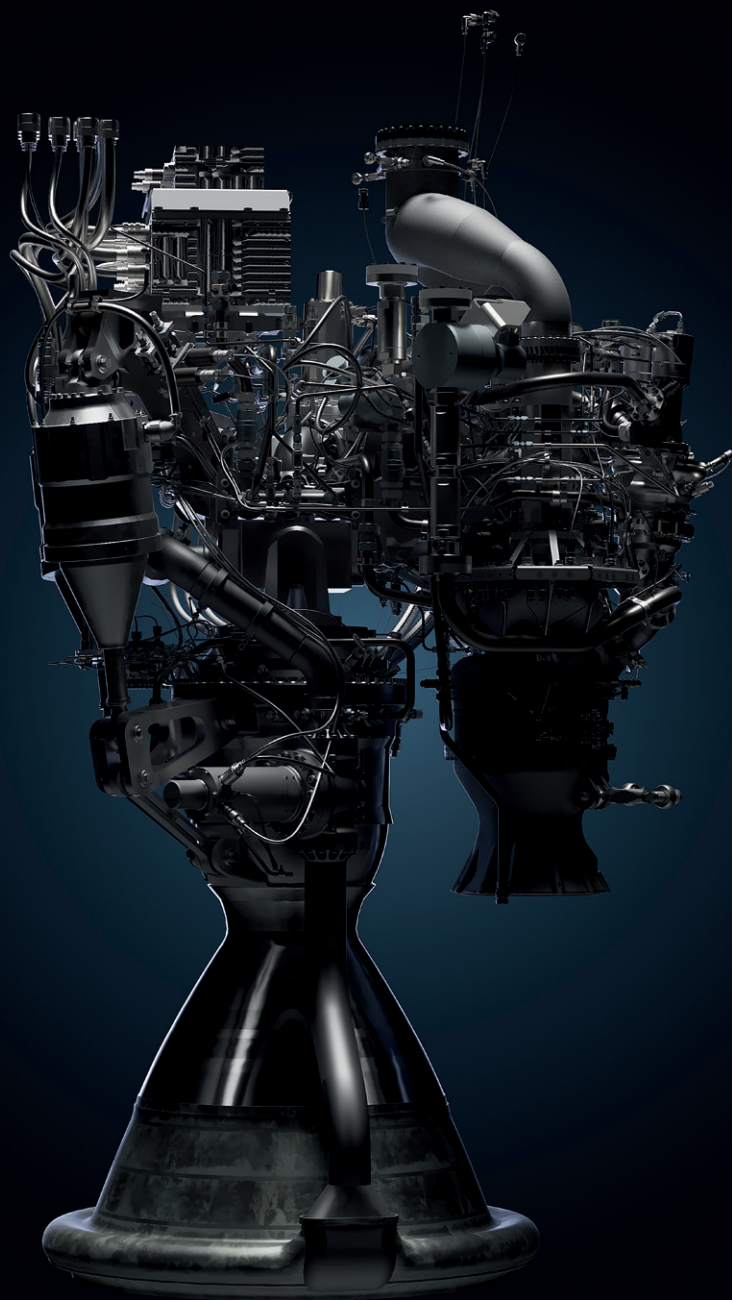




PROMETHEUS[®]

SPACE PROPULSION

- THE NEW ARIANEGROUP METHANE/OXYGEN HIGH-THRUST ENGINE
- DESIGNED TO POWER MEDIUM TO HEAVY LAUNCHERS
- DESIGNED TO ENABLE LAUNCHER REUSABILITY WITH RE-IGNITION CAPABILITY AND WIDE RANGE OF THRUST VARIATION



PROMETHEUS®

ARIANEGROUP, AT THE CUTTING EDGE OF EUROPEAN SPACE PROPULSION

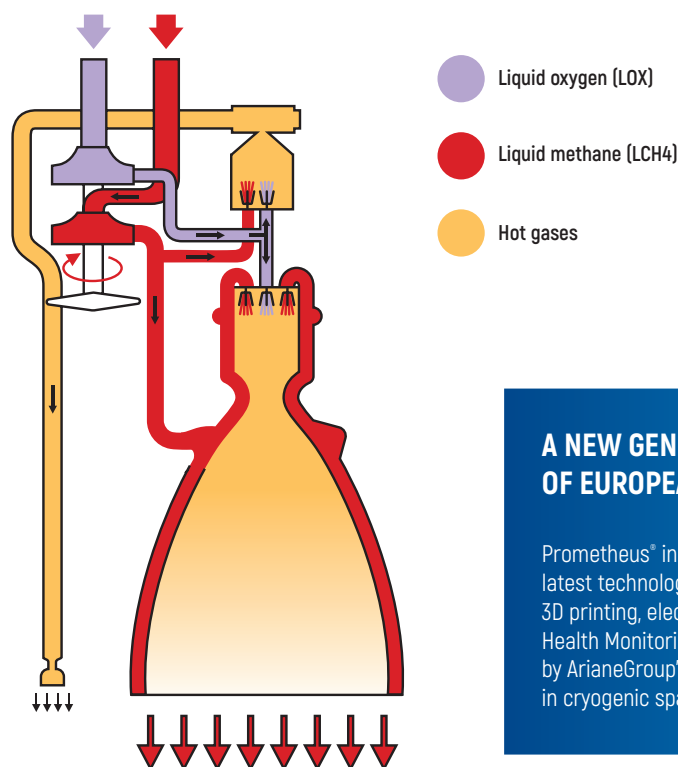
ArianeGroup, industrial leader in cryogenic propulsion systems, is the Prime contractor for the new reusable Prometheus® engine.

Prometheus® has been developed in cooperation with European partners under a European Space Agency (ESA) programme.

MAIN SPECIFICATIONS	
Cycle	Gas generator
Thrust in vacuum (kN)	1,200
ISP (s)	324
Throttleability	30 - 110%
Propellants	LOX-LCH4
Combustion pressure (bar)	~ 110
Mixture ratio	2.8
Mass flow rate (kg/s)	~ 280 - 100
NPSPO at reference point (bar)	3.25
NPPSM at reference point (bar)	2.35
Mass (kg)	1,300
Dimensions HxLxD (m)	2.99x1.64x1.32
Nozzle extension diameter (m)	1.32

A versatile engine designed for reusable launchers

- Prometheus® delivers a **thrust of more than 100 tons** in a vacuum. It is based on a brand-new design and employs innovative development and production methods.
- Intended for main stages of medium/heavy launchers, its **variable thrust (throttleability)** and **re-ignition capabilities** will provide mission flexibility.



A NEW GENERATION OF EUROPEAN ENGINES

Prometheus® incorporates some of the latest technological advances, such as 3D printing, electric control, Integrated Health Monitoring System, and is backed by ArianeGroup's decades of experience in cryogenic space engine systems.

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