



M4

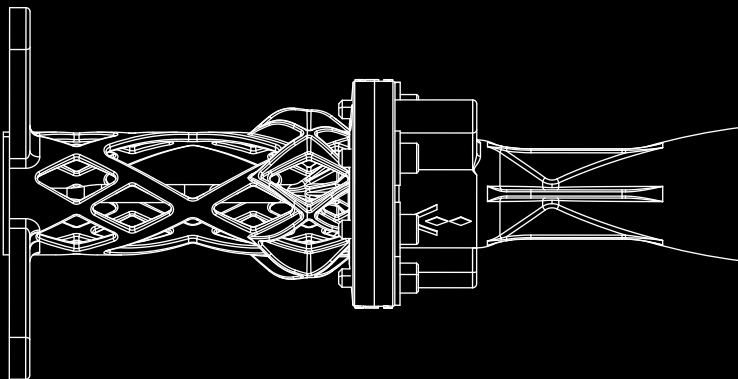
MONOPROPELLANT THRUSTER

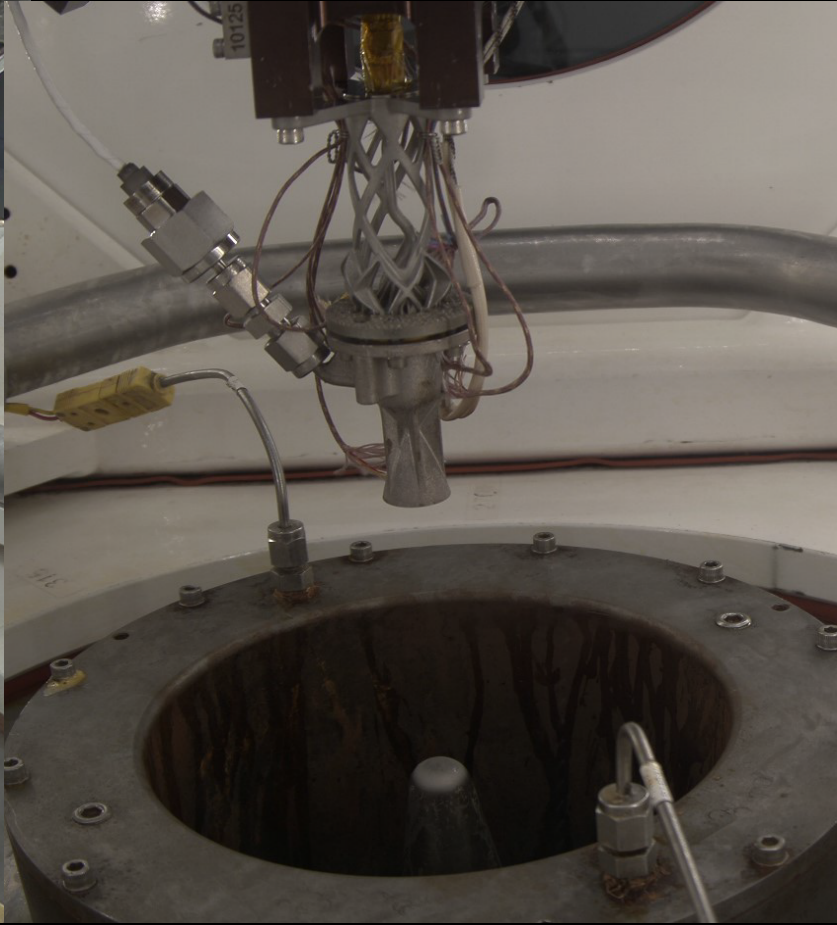
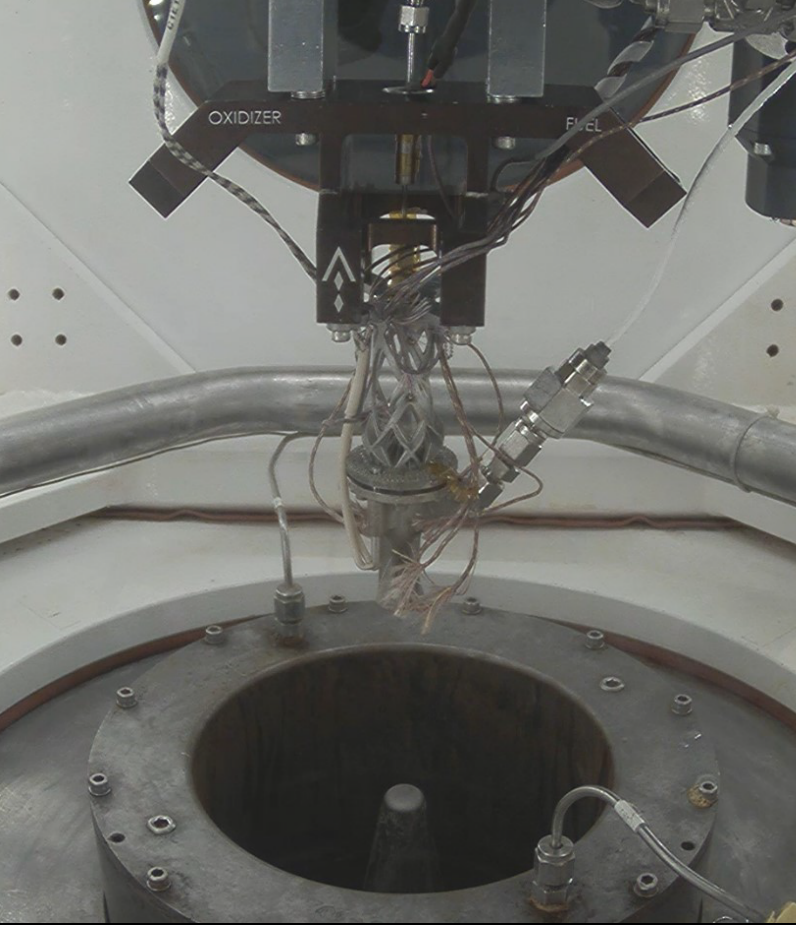
M4 is a 4 N (1 lbf) hydrazine monopropellant thruster designed for attitude control and precision maneuvering of small spacecraft.

A minimum impulse bit of 0.04 N.s (0.01 lbf.s) is achieved via a fast-actuating valve and optimized thrust chamber geometry enabling Rendezvous, Proximity Operations and Docking (RPOD). Operating at 200s of specific impulse (ISP) maximizes spacecraft maneuverability and longevity enabling it to complete more RPOD operations when compared with less performant thrusters.

M4 employs a highly optimized design fully utilizing the latest additive manufacturing techniques resulting in an extremely lightweight propulsion system, freeing up mass for other subsystems such as payload, power, or fuel. The thruster is delivered ready for spacecraft integration with convenient flying leads for the electric catalyst and valve heaters and thermistors, and pre-installed fluid interfaces all allowing for faster vehicle integration.

Overall, M4 provides an extremely mass efficient and low-cost propulsion solution for small spacecraft.





SPECS:

PULSING	Yes
THRUST	4 N (0.9 lbf)
FUEL	Hydrazine
INLET PRESSURES	250 psia, +/- 50 psi
SPECIFIC IMPULSE	200 s
EXPANSION RATIO	50
MINIMUM IMPULSE BIT	< 0.04 N.s
CYCLES/LIFE	75,000 cycles
LONGEST SINGLE BURN CAPABILITY	500s or greater
START AND SHUTDOWN TIME	< 10 ms
TOTAL MASS	270 g
PEAK POWER	7.5 W

ABOUT AGILE:

Based in beautiful Durango, CO, AGILE Space Industries is the premier innovation center for hypergolic propulsion systems.

Agile brings a unique blend of additive manufacturing experience, propulsion design capability, and world leading test facilities to enable the next generation of deep space missions.

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