

Magdrive's family of electric plasma thrusters offers reliable, high-performance, storable electric propulsion solutions for critical small satellite missions.

The SuperMagdrive represents the next level in space propulsion.

SUPER MAGDRIVE

POWER	50 kW
THRUST	1N+
SPECIFIC IMPULSE	1500 s – 2000 s
TOTAL IMPULSE	> 10 MNs
ENERGY STORAGE	2 MJ
MASS (full system)	65 kg
ELECTRICAL EFFICIENCY	40 mN/kW
THRUST VECTOR	10°
DIMENSIONS	60cm x 60cm x 60cm
AVAILABLE	2028

Predicted performances



SuperMagdrive

The Magdrive thruster uses a **pulsed power system (PPS)** to deliver a **multi-kA, multi-MW** electrical current pulse to the **plasma injector**. A small amount of solid metal propellant is vaporized into a plasma and accelerated to high velocities. This is referred to as a **shot**. Operating at high frequency, these shots of plasma are passed through a **magnetic chamber**. This accelerates and directs the **plasma exhaust**, producing thrust at a high specific impulse.



Customizable performance

Enables adjustable specific impulse and deep throttling for rendezvous, proximity operations, and precise maneuvering



Integrated microprocessor

Commanded through the satellite's master controls for an easy-to-integrate propulsion system



Storable metal propellant

Removes the need for heavy fuel tanks, cryogenics or pressurization, and eliminates handling hazards



Directional steering

By altering its magnetic properties, a single thruster can vector up to 10° for main propulsion or attitude control