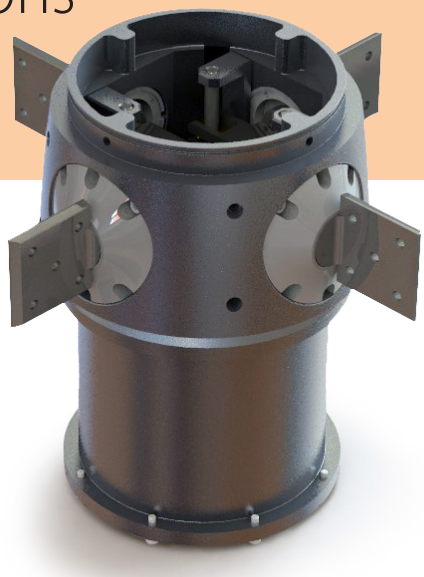
High-precision Servo Solutions for Demanding Conditions



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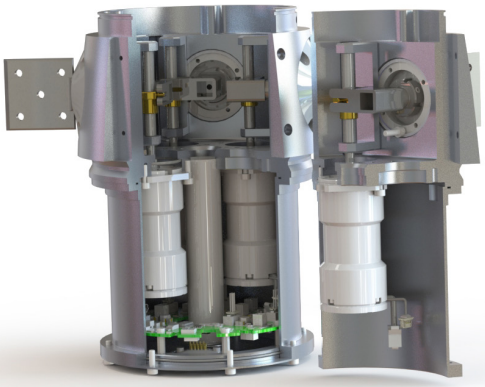
February 2025

- **Aerospace**
- **Industrial robotics**
- **Autonomous vehicles**
- **Renewable energy systems**



Reliable, Responsive, and Customizable 4-Axes System

The Challenge

- Deliver precise and reliable motion control in extreme environments.
- Enable accurate and responsive adjustments for dynamic operations.
- Ensure long service life with minimal maintenance.
- Provide control of multi-axes systems.

The Solution

- Provide a high-performance servo system enabling rapid and precise motion adjustments.
- Incorporate robust architectures including advanced BLDC motor technology, for enhanced durability.
- Offer customizable interfaces to simplify integration.
- Optimize for critical real-time control applications requiring high precision in demanding environmental conditions.

Features

- High-precision 12-bit rotary encoder for accurate position feedback.
- Closed-loop control bandwidth up to 130 Hz for fast response.
- Supports RS-422 interface with adaptable communication protocols.
- Lightweight—under 7 kg.
- Configurable safety features, including software-defined motion limits.
- Manual locking mechanism for secure zero-position alignment during testing.
- Integrated built-in-test (BIT) functionality for system diagnostics and reliability monitoring.

Specifications

- **Torque (load side):** Up to 5 Nm RMS, 10 Nm peak, optional 135 Nm peak configuration.
- **Bending load:** 2500 N (typical).
- **Position command/feedback frequency:** Up to 500 Hz, optional 1 kHz.
- **Speed:** Up to 200 degrees/sec (on load side).
- **Acceleration (load side):** Up to 800 deg/sec^2.
- **Power supply:** 24–42 VDC, 4 × 1 A RMS (continuous), 4 × 5 A peak.
- **Operational temperature range:** -55 °C to +70 °C, cold start at -40 °C.
- **Environmental protection:** Sealed to IP67, vibration and shock tested to MIL-STD-810.
- **MTBF (hours):** 5,000 operational, 150,000 storage.
- **Compliance:** MIL-STD-461.

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gevasol feedback technologies

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