

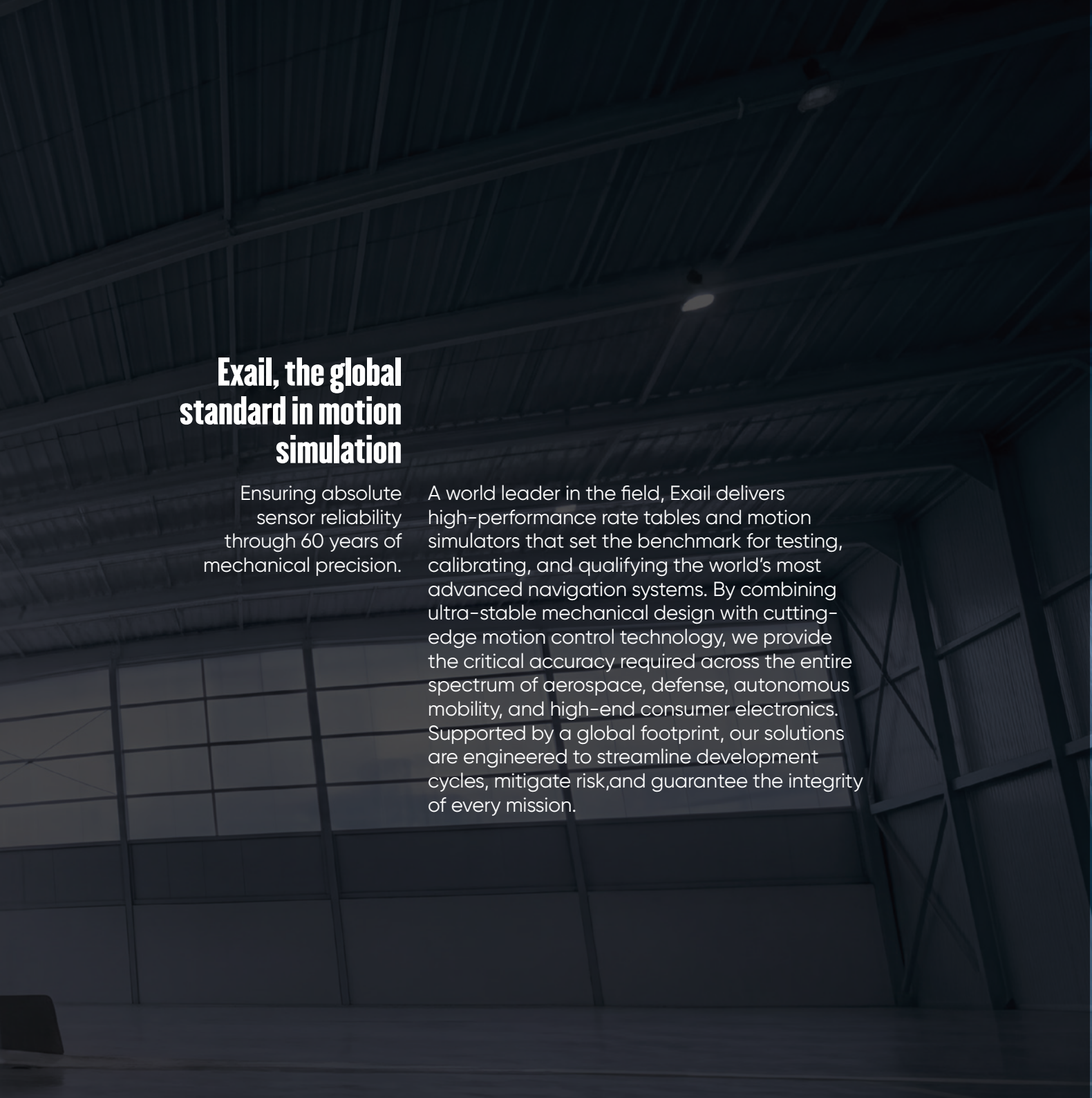
MOTION

SIMULATION



exail





Exail, the global standard in motion simulation

Ensuring absolute
sensor reliability
through 60 years of
mechanical precision.

A world leader in the field, Exail delivers high-performance rate tables and motion simulators that set the benchmark for testing, calibrating, and qualifying the world's most advanced navigation systems. By combining ultra-stable mechanical design with cutting-edge motion control technology, we provide the critical accuracy required across the entire spectrum of aerospace, defense, autonomous mobility, and high-end consumer electronics. Supported by a global footprint, our solutions are engineered to streamline development cycles, mitigate risk, and guarantee the integrity of every mission.

ENGINEERING PRECISION

FROM PROTOTYPE TO PRODUCTION

Exail EVO Series delivers high-performance simulation tables for the entire product lifecycle. Engineered for mission-critical navigation, defense, and aerospace, these systems integrate premium components for industry-leading precision. State-of-the-art electronics ensure maximum efficiency and safety across complex environments.

Versatile & **SCALABLE RANGE**

Tailored solutions covering full lifecycle support

High-performance systems with 1, 2 and 3-axis

High-capacity payloads ranging from 10 kg to 60 kg

Optional climatic chambers for testing from -55° to $+125^{\circ}$

Unrivalled control & **ELECTRONICS**

Seamless tuning via patented autotuning algorithms

Minimal phase-shift through active bandwidth enhancement

Absolute positioning using proprietary digital electronics

Maximum payload safety with real-time fault detection

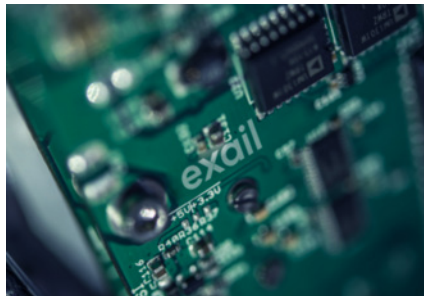
Advanced **MECHANICAL DESIGN**

Jitter-free stability via low-cogging direct drive motors

Superior dynamics through FEA-optimized structures

Leading repeatability via sub-ppm precision engineering

Lower upgrade costs through modular architecture

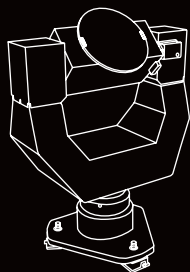


R&D AND PROTOTYPING **VALIDATING EARLY-STAGE DESIGNS**

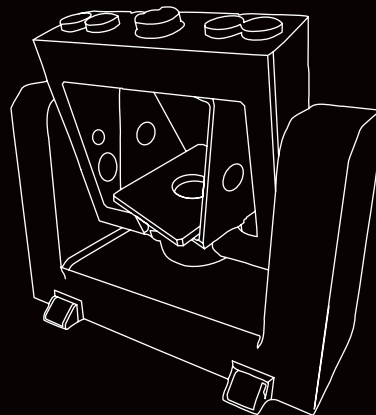
- **Versatile range:** 1 to 3-axis tables for accelerometers and navigation components.
- **Compact design:** Easy-to-install systems supporting payloads up to 20 kg.
- **Peak dynamics:** Engineered for testing at maximum capacity.
- **Cost efficiency:** Optimized performance for focused development budgets.
- **Easy scaling of test capabilities** with no civil works or facility modifications required
- **Optional integrated climatic chamber** (-55°C to +125°C) for comprehensive environmental simulation



EVO-10S
compact single-axis
positioning and rate table



EVO-30N
three-axis positioning
and rate table



EVO-AMI
compact two-axis
positioning and rate table

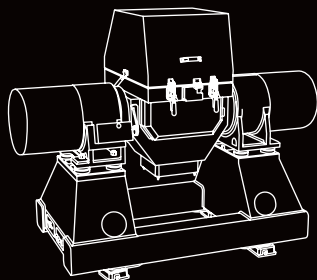
MASS PRODUCTION

OPTIMIZING THROUGHPUT TESTING

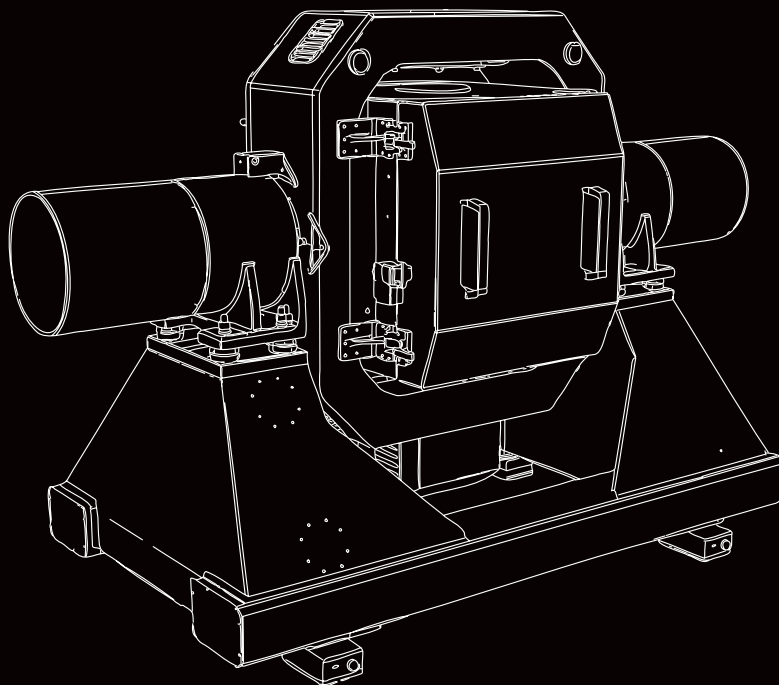
- **High-capacity:** Optimized for commercial MEMS and tactical inertial systems.
- **Multi-product testing:** Large counter rotative dual table-tops supporting multiple payloads up to 50 kg.
- **Sub arc-second precision:** Reliable positioning and repeatability for high-volume qualification.
- **Climate control:** Optional thermal chambers for environmental stress testing.
- **Optional integrated climatic chamber** (-55°C to +125°C) for comprehensive environmental simulation



EVO-10M
high-precision and high-dynamic
two-axis positioning and rate table



EVO-20M
high-precision and high-dynamic
two-axis positioning and rate table

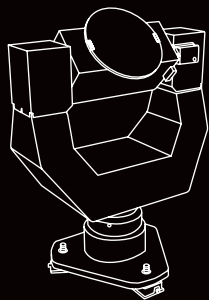


EVO-20L
high-precision and high-dynamic
two-axis positioning and rate table

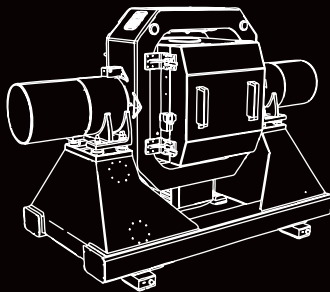
HWIL SYSTEMS

EXECUTING FULL-SYSTEM SIMULATION

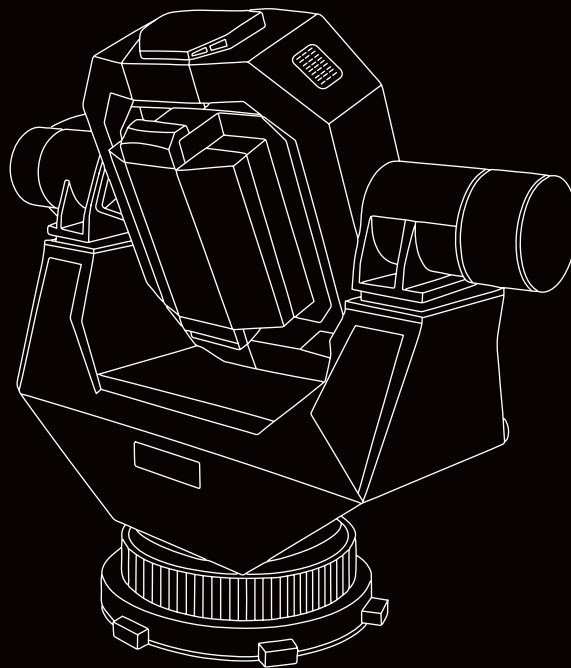
- **Full-system validation:** Robust 3-axis simulation for complex, large-scale integration.
- **Realistic scenarios:** High-fidelity HWIL environments to test performance and reliability.
- **Controlled stress:** Assessment under extreme vibrations and accelerations in a safe environment.
- **Real-time precision:** Optional reflective memory for repeatable cycles and instant feedback.
- **Real-time control:** Optional MATLAB® Simulink-based real-time cabinet
- **Unmatched dynamic performance** with an outer axis rate of up to $1200^\circ/\text{s}$ and 300 Hz single-axis capability
- **Full lineup of motion systems** spanning from single-axis to 5-axis systems, as well as centrifuges



EVO-30N
three-axis positioning
and rate table



EVO-20L
high-precision and high-dynamic
two-axis positioning and rate table



EVO-30L
three-axis positioning
and rate table

WHY CHOOSE EXAIL?

1

User-centric expertise

Designed by a leading INS manufacturer who understands the real-world constraints of sensor testing.

2

Field-proven reliability

Over XXX motion systems deployed worldwide for mission-critical and defense applications.

3

Unified operations

A single, standardized controller across the entire EVO Series to simplify training and maintenance.

6

Long-term scalability

Modular architecture and scalable software to evolve with your future testing requirements.

5

Tailored flexibility

Highly customizable mechanical and electronic configurations to match your specific payload needs.

4

Intelligent control

Patented autotuning algorithms for instant, seamless, and high-precision parameter adjustment.