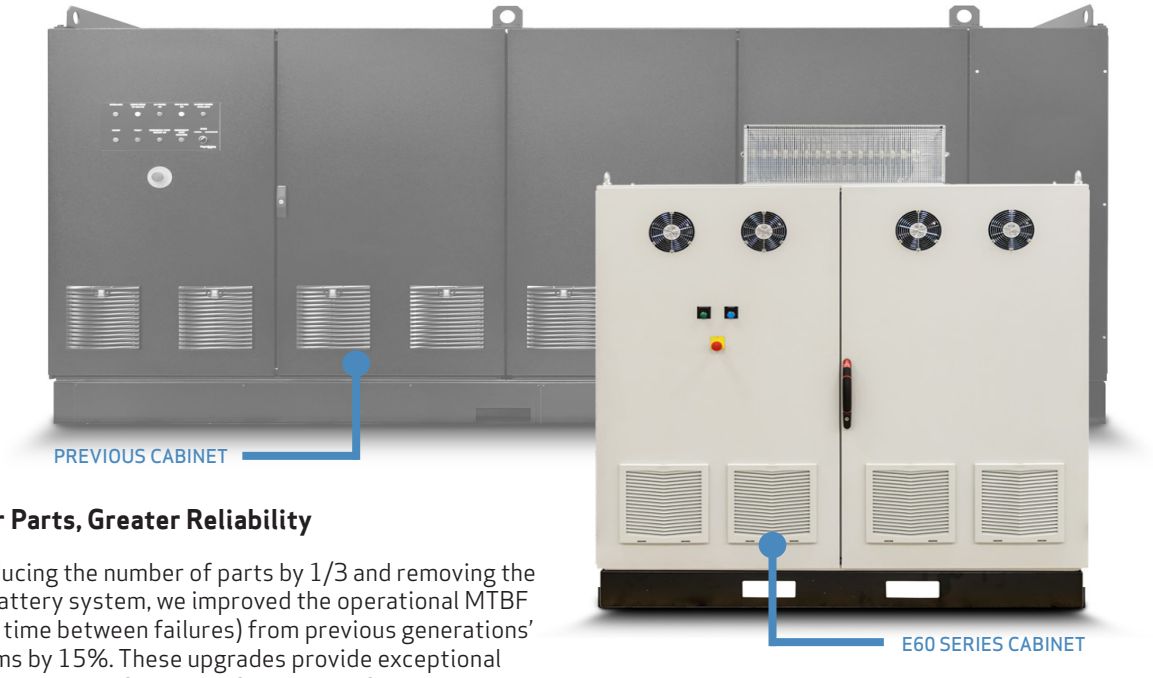
MOTION SYSTEMS E60 SERIES

The New Standard for Reliable, High Fidelity Electric Flight Simulation.

Rev. C, October 2025

MOOG | Shaping the way our world moves™

ENHANCED RELIABILITY SIMPLIFIED MAINTENANCE SUPERIOR PERFORMANCE

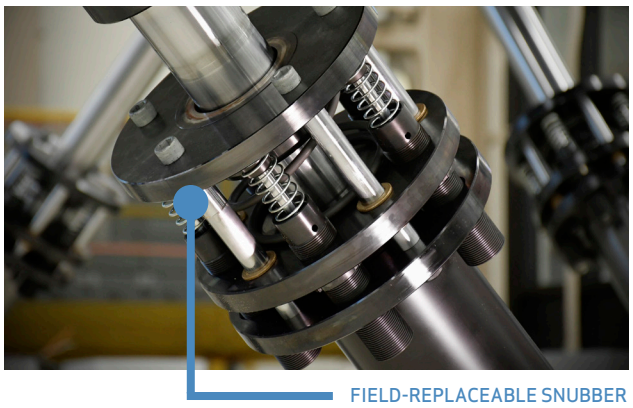


Fewer Parts, Greater Reliability

By reducing the number of parts by 1/3 and removing the RTH battery system, we improved the operational MTBF (mean time between failures) from previous generations' systems by 15%. These upgrades provide exceptional reliability and performance, further reenforcing the quality and longevity you've come to expect from Moog.

No Batteries Means No Battery Maintenance

Battery systems have limited shelf life and are costly to repair or dispose of. Our newest Motion Systems eliminate the need for batteries in the return-to-home feature and replaces them with a more sustainable energy storage technology.



Reduced Size

Not only are the latest power cabinets half the size of previous systems thanks to modern electronics, they are also backward compatible with previous systems, allowing for greater flexibility and extending the usefulness of existing actuators.

Ready for What's Next

Even with their reduced size, the new power cabinets are designed with additional capacity to accommodate new features and solutions to be implemented in the field as needed. Additionally, the newest systems are designed with proven and commercially available components, making it easier to adapt to changing technology and extend system life cycles.

Field-Replaceable Parts

In addition to updated software with improved diagnostic capabilities, technicians can repair the system's shocks (snubber) with field-replaceable parts, eliminating the need to return and repair the entire actuator and significantly reducing downtime.

NEW DESIGN, SAME EXCEPTIONAL QUALITY AND SUPPORT MOOG IS KNOWN FOR

MOOG AT A GLANCE:

- Over 40 years of experience creating solutions for simulation.
- First company to reach Level D Certification (now certified across 24 countries).
- Over 2,000 electric motion systems installed globally.
- Global network of repair, maintenance and engineering support professionals.
- Less than 1% return rate on actuators, resulting in 99.8% system uptime for customers.

Leaders in Motion

Our industry-leading simulation solutions have been trusted for their reliability and precision for over 40 years. Currently we have over 2,000 electric motion systems installed globally. We were also the first to reach Level D Certification and, are now certified across 24 countries.

Exceptional Fidelity and Performance

Our dedication to quality and reliability has allowed us to maintain a less than 1% return rate on actuators for repair at Moog. This allows for a 99.8% uptime rate on installed motion solutions.

Product Lifecycle Management

Moog is dedicated to supporting our customers and their systems throughout the product's lifecycle. Key components are sourced from Moog, providing enhanced control of Product Lifecycle Management.

Global Support

Our international support team is far-reaching and readily available, which means our local technicians can quickly access spare parts, conduct on-site repairs, and refresh rotable stock without wasting valuable resources.

TECHNICAL DATA

Model	E60 Series | MB-E-6DOF/62.5/14000KG	E60 Series | MB-E-6DOF/60/14000KG	E60 Series | MB-E-6DOF/42/14000KG
DOF max. excursion			
Surge (single)	-1.14 m / +1.38 m || -45.0 in / +54.5 in	-1.07 m/ +1.30 m || -42.4 in/ +51.7 in	-0.69m / +0.82 m || -27.5 in / +32.5 in
(max.)	-1.26 / +1.51 m II -49.5 / +59.55 in	± 1.32 m || ± 51.8 in	-0.81 / +1.00 m II -32.1 / +39.4 in
Sway (single)	± 1.44 m || ± 45.2 in	± 1.08 m || ± 42.7 in	± 0.71 m || ± 28.2 in
(max.)	± 1.26 m II ± 49.7 in	± 1.20 m || ± 47.2 in	± 0.83 m II ± 32.8 in
Heave (single)	± 0.90 m || ± 35.5 in	± 0.87 m || ± 34.3 in	± 0.59 m || ± 23.6 in
(max.)	± 1.00 m II ± 39.4 in	± 0.97 m || ± 38.4 in	± 0.70 m II ± 27.7 in
Roll (single II max.)	± 27.2 ° II ± 29.8°	± 26.2 ° || ± 28.9 °	± 20.2 ° II ± 23.3°
Pitch (single II max.)	-25.0 °/ +27.3 °II -27.8° /+30.7°	-24.1 °/ +26.5 ° || -27.0 °/ +29.9 °	-18.2 °/ +19.9 °II -21.3° /+23.7°
Yaw (single II max.)	± 35.2 ° II ± 39.2°	± 33.0 ° || ± 36.9 °	± 23.6 ° II ± 27.8°
DOF max. velocity			
Surge	± 1.00 m/s || ± 39.4 in/s	± 1.00 m/s || ± 39.4 in/s	± 1.00 m/s || ± 39.4 in/s
Sway	± 1.00 m/s || ± 39.4 in/s	± 1.00 m/s || ± 39.4 in/s	± 1.00 m/s || ± 39.4 in/s
Heave	± 0.80 m/s || ± 31.5 in/s	± 0.80 m/s || ± 31.5 in/s	± 0.80 m/s || ± 31.5 in/s
Roll	± 22.0 °/s	± 22.0 °/s	± 22.0 °/s
Pitch	± 21.0 °/s	± 21.0 °/s	± 21.0 °/s
Yaw	± 25.0 °/s	± 25.0 °/s	± 25.0 °/s
DOF max. acceleration			
Surge	± 5.9 m/s² II ± 0.6 g	± 5.9 m/s² || ± 0.6 g	± 5.9 m/s² II ± 0.6 g
Sway	± 5.9 m/s² II ± 0.6 g	± 5.9 m/s² || ± 0.6 g	± 5.9 m/s² II ± 0.6 g
Heave	±7.9 m/s² II ± 0.8 g	± 7.9 m/s² || ± 0.8 g	±7.9 m/s² II ± 0.8 g
Roll	± 150 °/s²	± 150 °/s²	± 150 °/s²
Pitch	± 150 °/s²	± 150 °/s²	± 150 °/s²
Yaw	± 250 °/s²	± 250 °/s²	± 250 °/s²
Max customer payload	14,000 kg 30,865 lb	14,000 kg 30,865 lb	14,000 kg 30,865 lb
Moment of inertia about X -axis	67,790 kg.m² 50,000 slug.ft²	67,790 kg.m² 50,000 slug.ft²	67,790 kg.m² 50,000 slug.ft²
Moment of inertia about Y-axis	81,348 kg.m² 60,000 slug.ft²	81,348 kg.m² 60,000 slug.ft²	81,348 kg.m² 60,000 slug.ft²
Moment of inertia about Z-axis	67,790 kg.m² 50,000 slug.ft²	67,790 kg.m² 50,000 slug.ft²	67,790 kg.m² 50,000 slug.ft²
CoG above moving platform centroid	≤ 1.651 m || ≤ 65.0 in	≤ 1.651 m || ≤ 65 in	≤ 1.651 m || ≤ 65.0 in
Top of platform	2.24 m || 88.2 in	2.14 m || 84.4 in	1.82 m || 71.78 in
Ground frame dia.	Approximately 6.73 m II 265 in	Approximately 6.73 m || 265 in	Approximately 5.94m II 234 in
Actuator stroke	1.59 m || 62.5 in	1.52 m || 60.0 in	1.07 m || 42.0 in
Equipment electrical requirements	480 VAC, 3-phase, 50/60 Hz	480 VAC, 3-phase, 50/60 Hz	480 VAC, 3-phase, 50/60 Hz
Optional transformer	75 kVA isolation tranformer, multiple primary voltages	75 kVA isolation tranformer, multiple primary voltages	75 kVA isolation tranformer, multiple primary voltages
Facility electrical requirements	380-600 VAC, 3-phase, 50-60 Hz	380-600 VAC, 3-phase, 50-60 Hz	380-600 VAC, 3-phase, 50-60 Hz
Electronics & Software	Motion control cabinet, computer, software, maintenance & diagnostic web interface, Ethernet UDP API	Motion control cabinet, computer, software, maintenance & diagnostic web interface, Ethernet UDP API	Motion control cabinet, computer, software, maintenance & diagnostic web interface, Ethernet UDP API
Typical simulation application	FAA & EASA level C/D full flight simulation, truck, tank, and entertainment simulation	FAA & EASA level C/D full flight simulation, truck, tank, and entertainment simulation	Flight simulation, car, truck, tank, and entertainment simulation

MODEL NUMBER EXPLANATION

MB = Motion Base, **E or EP =** Electric or Electric Pneumatic, **6 DOF =** 6 Degrees of Freedom, **XX or 60 =** actuator stroke inches, **XXXXX or 14000 KG =** Payload

System performance specifications are estimates that are subject to change. Please consult with Moog for technical information.

ADDITIONAL SIMULATION PRODUCTS

Moog has a complete suite of flight simulation products to complete your program.

CONTROL LOADING SYSTEMS

Moog control loading solutions range from basic flight training to high fidelity full flight simulations that meet global certifications from EASA, FAA, and military equivalents.

www.moog.com/products/control-loading-systems/

G-SEATS

Simulate realistic, sustained G-Force in helicopter and fighter G-Seats with high fidelity controllers and user-friendly interfaces.

www.moog.com/products/g-seats/

LEADERS IN MOTION

Companies around the world rely on Moog motion systems for their Level D certified flight simulation solutions.

EXPLORE OTHER INDUSTRY-LEADING MOTION SYSTEMS SOLUTIONS FROM MOOG

Around the world, our motion platforms for payloads ranging from 500 kg to 14,000 kg (1,100 to 31,000 lb) help customers provide highly realistic motion cues in simulators for trucks, armored vehicles, tanks, trains, and fixed wing and rotary wing aircraft.

Our turnkey approach encompasses complete systems including motion bases, generic-or application-specific software, training, replacement parts, repair, and assistance in tuning, installation and system acceptance.

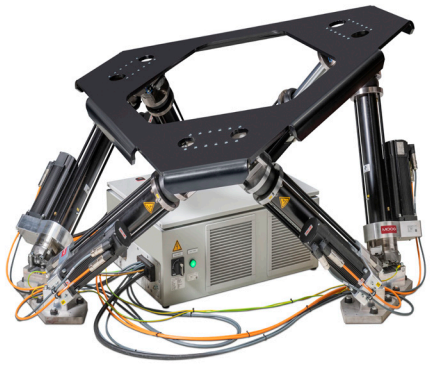
Working closely with customers to provide solutions that are precisely matched to their unique requirements, our design teams offer a wealth of technical knowledge and real-world experience for all 6-DOF and special systems.

P60 Series Motions Systems

The new Moog Motion System P60 Series with pneumatic support is a cutting-edge 6-Degree-of-Freedom (6-DOF) platform designed to provide exceptional quality, efficiency, and reliability.

Small Motions Systems

These systems deliver on value and performance while optimizing size. Ideal for auto, rail vehicle, small aircraft and light helicopter simulation, as well as automotive testing and motion for entertainment rides.



SPECIAL SYSTEMS

When you require a performance envelope that has to be customized we can meet your needs.

With special payloads, stroke lengths, motion cueing changes, number of DOF or platform characteristics Moog can precisely match your unique application.

Learn more at:
www.moogsimulation.com

Turret Test System

8-DOF system with tilt table

Vibration Platform

7-DOF system with lateral rail

FLEXIBLE SERVICE WITH A GLOBAL REACH

At Moog, we are committed to providing exceptional support to our customers, no matter where they are located. Our extensive network of service providers spans over 20 countries across five continents, ensuring that help is always within reach.

With more than 2,000 motion systems installed worldwide, we have the right personnel in the right places at the right times. Our experts ensure that your training programs run smoothly, efficiently, and profitably.

Our range of services supports you throughout the entire life cycle of your system, from commissioning to planned maintenance to upgrades. Whether you need support or spare parts, we are ready to assist you.

Not ready for the latest Motion System? Consider these key programs:

- Actuator life extension
- Motion computer upgrade
- Electrical cabinet upgrade and replacement
- Control Loading upgrade
- Hydraulic to electromechanical conversion

TAKE A CLOSER LOOK

Moog designs a range of motion control products to complement those featured in this document. Moog also provides service and support for all of our products. For more information, contact the Moog facility closest to you.

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www.moogsimulation.com

Moog Motion Systems MB-E-6DOF/60/14000KG
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