

Series 6DOF2000E

Electric Motion Platform



- **6 Degrees of Freedom**
- **1000 Kg Payload /2200 lbs**
- **Integrated Design**
- **Electric Actuation**



Cabin images courtesy of AITEC GmbH & SimEx Inc.

Worldwide Support

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Series 6DOF2000E

Moog Inc.

Moog Motion Systems offer high performance solutions to motion simulator requirements. Fifty years of experience and a proven track record makes Moog the world's leading supplier of motion system components and integrated platforms in both the training and entertainment markets.

Moog produces both 4 degree and 6 degree of freedom (DOF) motion bases, with actuator strokes ranging from 12 to 62 inches and load capacities up to 14,600 Kg (32,200 lbs).

Specifications: 6DOF2000E Size:

Settled Height0.71 m (28")
 Foot Print≈1.84 m (w) x 1.84 m
 (≈72.5" (w) x 72.5")
 Std. Flying Floor
 Structural Triangle≈1.5 m (59") per side
 System Weight650 Kg (1433 lbs)

Facility:

Average Floor Loading
 Compression1900 Kg/m²
 (380 lb/ft²)
 Power
 Control1φ, 100-120 vac.
 50-60 Hz
 10 Amp service
 Main.....1φ, 100-120 vac.
 50-60 Hz
 20/30 Amp service

Load:

Max. Customer Payload..1000 Kg (2205 lbs)
 CG Location
 Horizontal.....≤ 0.06 m (2.5")
 (from centroid)
 Vertical.....≤ 0.6 m (24")
 (above the top of flying platform)
 Motion Centroid.....0.13m (5.1")
 (below the top of flying platform)
 Mass Moment of Inertia (relative to centroid)
 Pitch Axis.....650 Kg-m²
 (5750 in-lb-sec²)
 Roll Axis400 Kg-m²
 (3540 in-lb-sec²)
 Yaw Axis650 Kg-m²
 (5750 in-lb-sec²)

Actuator Features:

- DC Servomotor
- Fold-back design for low boarding height and efficient field service
- Low friction actuator using precision ballscrew design
- Internal hydraulic snubbers for end of stroke cushioning
- Encoder feedback
- End of stroke limit switches
- Actuator brakes available for "freeze mode"/E-stop circuit

Documentation:

- Facility Requirements
- Installation Instructions
- Operation/Maintenance Manual

Reliability:

- Custom high efficiency drives and actuators optimized for performance and long life in demanding applications. Designed for a minimum 5 year life.
- Detailed fault tree analysis for all single point and multiple failure modes has been performed.
- Drives have been life cycle tested and have proven field history.

Field Service and Repair:

- One (1) year part warranty from the date of shipment
- Worldwide support
- Installation and training support provided

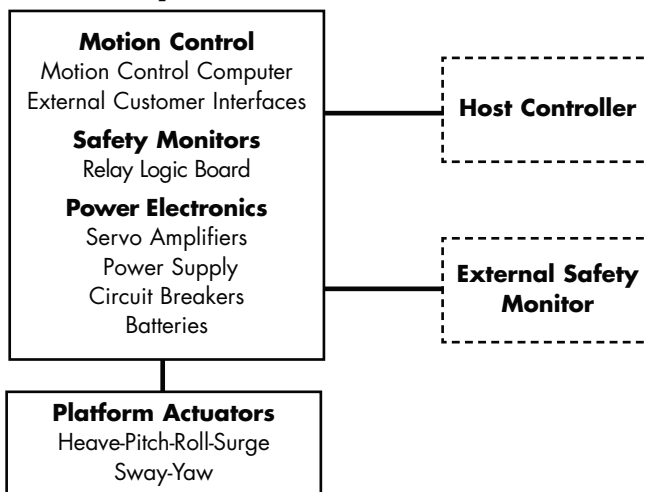
Compliance:

- The system is designed to U.S. and European electrical codes.
- The system utilizes UL and CE compliant components.
- Designed to meet the AFGS-87241A requirement to egress to home position in event of major single point failures.
- Electronics are CE marked

Interface Options:

- Serial Interface (RS-485)
- Ride Storage
 - Real Time (non-ride storage)
- Ethernet Interface
- Real Time
 - Real Time with Motion Cueing (Motion Dynamics Algorithm)

Motion System Interfaces:



Motion:

Degree of Freedom	Displacement Comb. Motion	Displacement Single DOF	Velocity	Acceleration
Pitch	+25/-23 deg	±22 deg	±30 deg/s	±500 deg/s ²
Roll	±22 deg	±21 deg	±30 deg/s	±500 deg/s ²
Yaw	±23 deg	±22 deg	±40 deg/s	±400 deg/s ²
Heave	±0.18 m (±7.0 in)	±0.18 m (±7.0 in)	±0.30 m/s (±11.8 in/s)	+0.5 g
Surge	±0.27 m (±11.1 in)	±0.25 m (+10.2/-9.5in)	±0.50 m/s (±19.7 in/s)	±0.6 g
Sway	±0.26 m (±11.7in)	±0.25 m (±10.2 in)	±0.50 m/s (±19.7 in/s)	±0.6 g

Specifications are subject to change without notice.



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