PS-6TM-550

Full 6DOF motion where a Stewart hexapod would need far more height, opening low-ceiling rooms on clearance alone. Carries a two-seat cockpit.



MADE IN POLAND · EUROPEAN UNION MEMBER · GLOBAL SHIPPING

0.4 G	800 mm/s	17°	±16.4°	266+ mm
MAX ACCELERATION	MAX VELOCITY	MAX TILT	YAW RANGE	TOTAL HEAVE

Total heave is full travel; other motion figures are per-axis maxima from neutral. Axes are not driven to their extremes simultaneously.

Engineered for professional simulation

Full 6DOF Under a Low Ceiling

The cockpit drops into low-ceiling and existing rooms a hexapod cannot enter, so the integrator keeps the chosen site.

Two-Seat Cockpit in All Six Axes

The training center runs crew scenarios on a single platform, training two people per session instead of one.

400V Power With Fail-Safe Brakes

Utility cost stays predictable across multi-shift duty, and a power cut holds the loaded two-seat cockpit in place, not drifting down.

Six-leg low-profile platform

Six electric rotary actuators in a hexagonal layout sit under the cockpit and move it through all six axes - pitch, roll and heave plus surge, sway and yaw - in a low-profile build, without the height a ball-screw hexapod stack needs. The coordinated actuator travel is what forms the rotations and translations from one short frame.

Plug-and-play for supported titles, or full SDK

- **ForceSeatPM** - platform manager, auto-detects supported titles
- **ForceSeatMI/DI SDK** - integrate motion into custom applications
- **ACE Engine** - professional motion-cueing
- **VR HeadWay** - VR motion compensation

AXIS	SINGLE EXCURSION	MAX EXCURSION	MAX VELOCITY	MAX ACCELERATION
Heave	-129.5 / 136.9 mm	-129.5 / 136.9 mm	460 mm/s	0.4 G
Surge	-178 / 157.2 mm	-203 / 182 mm	800 mm/s	0.4 G
Sway	-152.4 / 152.4 mm	-172 / 172 mm	700 mm/s	0.4 G
Pitch	-13.1 / 12.8°	-17 / 16.5°	46 °/s	380 °/s²
Roll	-14.2 / 14.2°	-14.9 / 14.9°	45 °/s	400 °/s²
Yaw	-14.6 / 14.6°	-16.4 / 16.4°	62 °/s	380 °/s²

PAYLOAD SPECIFICATIONS	
Payload	550 kg
CoG height above MPC	<500 mm
Moments of inertia (Ixx, Iyy, Izz)	250 kg·m²

MAIN DIMENSIONS	
Total Width	1461 mm
Total Length	1513 mm
Min Height	521 mm
Max Height	787 mm

SPECIFICATIONS	
Architecture	6 DOF
Drive technology	Helical-Bevel Geared
Product weight	460 kg

POWER & INSTALLATION	
Supply	400V three-phase (230V to neutral), 50/60 Hz; the feed is not supplied.
Network type	Wye only, ground and neutral (TN-S).
US supply	US 208V or 480V needs a transformer to reach 400V.
Circuit protection	25A type C circuit breaker.
EMC configuration	Runs on a standard RCD/GFCI-protected circuit.
Grounding	High leakage current - permanent solid protective earth, fitted by a qualified electrician.
Installation	Three-phase install by a qualified electrician; full detail in the manual.
Connection	USB or Ethernet

POWER DRAW	
Average power	5 kVA
Peak power	8 kVA
Average current	8 A/ph
Peak current	14 A/ph
Avg power - stress test	4.4 kW
Avg power - typical game	1.0 kW

What's in the Box.

HARDWARE

- ✓ **PS-6TM-550**
  A low-profile six-actuator platform on helical-bevel geared servos - full 6DOF for a cockpit at a low installed height.
- ✓ **PS-SB400 Cabinet + PS-BP400 Inverter**
  Power and control - AC/DC protection and controller on a 400V three-phase supply. The motor inverters sit in a separate PS-BP400 unit, bracketed to the cabinet (7U together in a 19-inch rack) and separable if the install needs it. The controller connects to the host PC over USB or Ethernet.
- ✓ **PS-SBR Remote + E-Stop**
  The PS-SBR remote (E-STOP, KNEEL, POWER LOCK) and PS-SBEC stop button - the hardware safety chain to park or stop motion. The keyed POWER LOCK keeps arming with the operator; the 3 m PS-SBEC lead adds a stop within reach.
- ✓ **Electromagnetic Brakes**
  One safety brake per actuator - engages on power loss and holds the load. A fail-safe, standard here.
- ✓ **Cable Set**
  Mains, USB to the host PC, and the PS-SBR remote and EMCY safety leads - wired together as delivered.
- ✓ **Packing & Handling**
  Ships factory-assembled and calibrated in a forklift-ready crate - the integrator unpacks and installs, with no on-site build.

MotionSystems

SOFTWARE & LICENSES

- **ForceSeatPM**
  Auto-detects 154+ supported games with pre-tuned profiles. Included free, with free software updates.
- **Sim Profiles**
  Pre-tuned motion profiles for the popular sims and games, so the first session already feels right.
- **ACE**
  The motion cueing engine that turns simulator telemetry into felt acceleration - the sharp onset of a bend or brake on the platform, with sustained forces held by coordinated tilt rather than a crude static roll.
- **VR HeadWay**
  VR motion compensation that cancels the platform's own movement from the headset, so the view stays stable and motion sickness stays low. Included free.
- **Docs & 3D Model**
  Full documentation and a simplified 3D STP model, plus the EC Declaration of Incorporation (2006/42/EC) for partly completed machinery - the platform is integrated into a final machine on site.
- **24-Mo Warranty**
  A 24-month warranty on the hardware and motion electronics, with free software updates throughout.

OPTIONAL HARDWARE

Wheels & Feet Set

Transport wheels and adjustable feet to move and level the platform where it is not bolted down; suitability for a given cockpit follows the product documentation.

OPTIONAL SOFTWARE AND SERVICES

ForceSeatMI - Motion SDK

Motion SDK to drive the platform from custom software on top of ForceSeatPM. Licensed per motion platform, with the key stored on the PC.

ForceSeatDI - Direct Interface SDK

Low-level SDK that drives the hardware directly, without ForceSeatPM - each platform driven independently, on Windows, Linux or Raspberry Pi. Licensed per platform, with the key stored on the motion controller.

Remote Training (online)

Six-hour online session - overview, safety, operation, maintenance, ForceSeatPM setup, diagnostics and tuning. Per session.

VR HeadWay CrossPC

A paid VR add-on, licensed separately from the base VR HeadWay. One CrossPC license covers exactly two VR users on a shared platform - each seat has its own rendering PC and geometry-correct compensation (for example pilot and copilot). More seats need an additional license.

Motion Theater

Plays pre-authored motion with video or group sessions - for theaters, attractions and briefings, not live sim. Per platform.

More Options

Profile packs, installation, reports, extended warranty and bespoke development - talk to the Motion Systems team to tailor it.

MOTION SYSTEMS

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PRODUCT

RESOURCES

All platforms
Knowledge Hub
Buyer's Guide