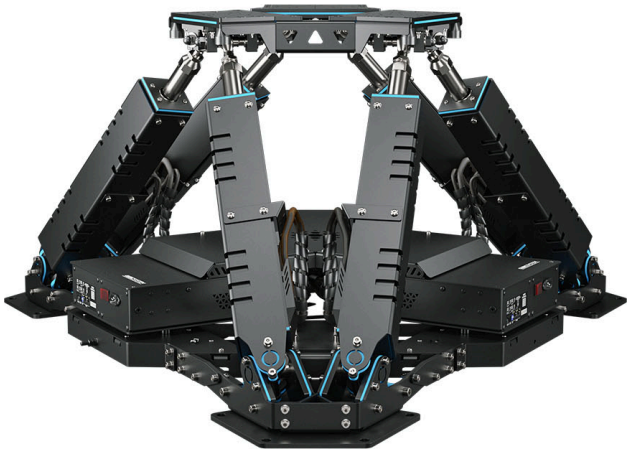
PS-6TL-150

Compact Stewart hexapod for industrial test rigs - cameras, antennas, optical modules, not human cockpits. Production-speed profiles for centered instrumentation.

MADE IN POLAND EUROPEAN UNION MEMBER

GLOBAL SHIPPING



0.38 G	530 mm/s	32.7°	±22.1°	138+ 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

Built for Test Rigs, Not Cockpits

An R&D or metrology team runs dynamic profiles on a frame tuned for instruments, so the moving mass stays low.

Fast, Repeatable Profiles for Metrology

Profiles run at production speed while holding accuracy, and every run repeats the same way, so a long campaign yields comparable data.

Lab Mains, No Three-Phase

It installs on existing single-phase supply with no facility power assessment or panel upgrade.

Six-leg Stewart hexapod

Six electric ball-screw linear actuators sit in a Stewart hexapod between the base feet and the upper frame, each carried on upper and lower cardan joints. A servo motor turns a recirculating ball screw, extending and retracting each strut; coordinating all six struts forms the full six axes of motion.

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	-61.6 / 77.1 mm	-61.6 / 77.1 mm	440 mm/s	0.38 G
Surge	-80.2 / 64.9 mm	-89 / 90 mm	500 mm/s	0.38 G
Sway	-68 / 68 mm	-77 / 77 mm	530 mm/s	0.38 G
Pitch	-19.9 / 20.8°	-24.7 / 32.7°	120 °/s	900 °/s²
Roll	-20.8 / 20.8°	-22.3 / 22.3°	130 °/s	1200 °/s²
Yaw	-21.4 / 21.4°	-22.1 / 22.1°	140 °/s	1000 °/s²

PAYLOAD SPECIFICATIONS	
Gross Moving Load	150 kg
CoG height above MPC	<500 mm
Moments of inertia (Ixx, Iyy, Izz)	60 kg·m²

MAIN DIMENSIONS	
Total Width	1258 mm
Total Length	1258 mm
Min Height	587 mm
Max Height	726 mm

SPECIFICATIONS	
Architecture	6 DOF
Drive technology	Linear Actuator
Product weight	232 kg

POWER & INSTALLATION	
Supply	Single-phase from an ordinary earthed socket - US (120V) or EU (230V) mains.
Network type	Standard one-phase, ground and neutral, RCD-protected.
Circuit protection	16A type B circuit breaker (EU 230V).
Grounding	Standard protective earth, as on any earthed socket.
Installation	Runs from a compact driver box - no power cabinet, no three-phase feed.
With PS-SB230 (optional)	The optional PS-SB230 cabinet runs the platform on 230V single-phase mains; for a 120V supply, contact Technical Support.

POWER DRAW	
Average power	0.7 kVA (120 V) / 0.8 kVA (230 V)
Peak power	0.7 kVA (120 V) / 0.9 kVA (230 V)
Average current	6 A (120 V) / 4 A (230 V)
Peak current	9 A (120 V) / 6 A (230 V)
Avg power - stress test	0.4 kW (120 V) / 0.4 kW (230 V)
Avg power - typical game	0.1 kW (120 V) / 0.1 kW (230 V)

What's in the Box.

HARDWARE

- ✓ **PS-6TL-150**
  A compact six-actuator ball-screw hexapod on QS-L1 actuators - all six axes, crisp direct travel.
- ✓ **Driver Box + Power Supply**
  A compact driver box and single-phase supply (120 V US / 230 V EU) run the six QS-L1 actuators from a wall outlet - no cabinet or three-phase.
- ✓ **Motion-Lock**
  A hardware stop switch - press it and motion cuts at once. With no brakes to hold the load, the platform settles to its lowest resting position.
- ✓ **Cable Set**
  The USB, power and Motion-Lock cables - the platform wires 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

PS-SB230 Cabinet (E-Stop upgrade)

Optional, with PS-SBR remote and PS-SBEC button - upgrades Motion-Lock control to a full E-Stop chain. The upgrade is to the stop circuit, not the mechanics: with no holding brakes, an E-Stop cuts the drive and the platform settles to its lowest position rather than holding in place - the same as the standard Motion-Lock. The cabinet runs on 230V single-phase mains; for a 120V supply, contact Technical Support.

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

Miedziana 7, 55-003 Nadolice Wielkie, Poland
motionsystems.eu
info@motionsystems.eu
Made in Poland (EU)

PRODUCT

RESOURCES

All platforms
Knowledge Hub
Buyer's Guide