PS-6TL-1500

For full-cabin flight, defense and automotive R&D simulators - long vertical travel for sea-state and runway motion, delivered in modules, the heaviest about 300 kg.

MADE IN POLAND EUROPEAN UNION MEMBER

GLOBAL SHIPPING



0.71 G	700 mm/s	26.1°	±26.7°	507+ 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

Over 505 mm of Heave for Sea and Runway

An operator replays sea state, deck pitch and runway rotation at full height, so vertical motion feels the way a real hull or airframe delivers it.

1500 kg Gross Load for a Fully Fitted Cabin

Instrument racks, added stations and mission hardware all fit, so one platform covers several cabin configurations without a hardware swap.

Ships in Modules Through Standard Doors

Defense rooms, naval sites and existing rooms take delivery straight to the installation room, with no oversized access or loading dock needed to get the platform in.

Six-leg Stewart hexapod

Six electric ball-screw actuators stand in a Stewart hexapod between the base feet and the upper frame. In each leg a servo motor drives a recirculating ball screw through a timing belt, turning that rotation into smooth linear travel.

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	-238.3 / 269.2 mm	-238.3 / 269.2 mm	400 mm/s	0.51 G
Surge	-362.6 / 355.5 mm	-383 / 382 mm	700 mm/s	0.71 G
Sway	-325.3 / 325.3 mm	-391 / 391 mm	700 mm/s	0.71 G
Pitch	-20.4 / 20.4°	-26.1 / 25.6°	35 °/s	250 °/s²
Roll	-21.3 / 21.3°	-23.1 / 23.1°	35 °/s	250 °/s²
Yaw	-24.9 / 24.9°	-26.7 / 26.7°	35 °/s	250 °/s²

PAYLOAD SPECIFICATIONS	
Gross Moving Load	1500 kg
Payload (top frame fitted)	1350 kg
CoG height above MPC	<750 mm
Moments of inertia (Ixx, Iyy, Izz)	2000 kg·m²

MAIN DIMENSIONS	
Total Width	2933 mm
Total Length	2766 mm
Min Height	1236 mm
Max Height	1744 mm

SPECIFICATIONS	
Architecture	6 DOF
Drive technology	Linear Actuator
Product weight	1600 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	50A type C circuit breaker.
EMC configuration	EMC input filters fitted as standard for demanding operation in environments with high electromagnetic interference; the drive needs a permanent protective earth, not a standard RCD/GFCI. A filter-free build for RCD/GFCI operation is available on request.
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	18 kVA
Peak power	48 kVA
Average current	26 A/ph
Peak current	70 A/ph
Avg power - stress test	17 kW
Avg power - typical game	2.5 kW

MotionSystems

What's in the Box.

HARDWARE

- **PS-6TL-1500**
  The highest-gross-moving-load ball-screw hexapod (1500 kg gross moving load, 1350 kg payload) - all six axes for the largest cockpits and cabins. The factory top frame accounts for the 150 kg difference; removing it and bolting the cabin floor directly to the mounting points frees the full 1500 kg - validated during scoping.
- **PS-SB400 Cabinet**
  Power and control - AC/DC protection and controller, on a 400V three-phase supply. 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 as factory-calibrated modules in separate forklift-ready crates, each on its own pallet - assembled on site by the integrator with a crane or hoist.

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, including the mounting-point layout, 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.

MotionSystems

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