

For your simulator, add six-degree-of-freedom motion.

Standard six-degree-of-freedom electric motion platform

For simulator manufacturers and system integrators: a motion base for flight, driving and marine simulation, also suitable for upgrading static simulators when payload, installation and software integration conditions are met.

This product is a motion platform. Cockpit, controls, displays and simulation software integration and supply must be confirmed separately.



6 DOF

Three translations · Three rotations

300 kg

Total load above the platform · centre of gravity assessed per project

1400 × 800 mm

Mounting deck dimensions

160 kg

Equipment net weight

Keep your simulation system, assess adding motion.

Customers with existing cockpits, displays and controls can check mechanical and software compatibility before defining a motion upgrade.

01

Upgrade existing equipment

Assess retaining existing cockpits, seats, controls and displays while adding a motion platform. What can be retained depends on payload and mounting conditions.

02

Reduce base development work

Use an existing platform design and its parameters as the starting point, focusing more development work on simulation content, control systems and integration.

03

Expand motion configurations

Plan static and motion versions of a simulator family or assess upgrades for existing customers. Shared structures and controls are confirmed per project.

FLIGHT

Flight simulation

Motion cues for flight attitude changes, take-off and landing.

DRIVING

Driving simulation

Motion feedback for acceleration, braking, steering and road changes.

MARINE

Marine simulation

Heave, roll and pitch cues representing changing sea conditions.

These are application directions, not a promise of included simulation software or completed integration with every system. Results depend on simulation data, motion algorithms, available travel and commissioning.

Six coordinated actuators, a foundation for spatial motion.

Coordinated extension and retraction of six electric actuators changes deck position and attitude. Each direction is produced by the mechanism as a whole; one actuator does not correspond to just one degree of freedom.



Heave

Vertical translation



Surge

Forward / backward translation



Sway

Left / right translation



Pitch

Forward / backward tilt



Roll

Side-to-side tilt



Yaw

Heading rotation

Single-axis limits cannot necessarily be reached simultaneously in combined poses. Confirm the available envelope for the payload, centre of gravity and control limits.

Check the load and space first, then select the motion range.

The platform load is 300 kg: the total weight placed on it. The amplitudes and speeds below are loaded maxima for each direction moving independently. Centre of gravity and off-centre loading are assessed against the customer's load configuration.

Six-axis motion parameters

Motion	Range	Speed
Heave	±70 mm	250 mm/s
Longitudinal translation	±100 mm	250 mm/s
Lateral translation	±100 mm	250 mm/s
Pitch	±12°	25°/s
Roll	±12°	25°/s
Yaw	±12°	25°/s

The total load includes the customer's cockpit, seats, occupants, equipment and mounting accessories. Loaded maximum amplitudes and speeds in individual directions cannot necessarily be achieved simultaneously in combined motion. Load conditions and the combined workspace are confirmed for each project.

Equipment and installation reference

Platform load	300 kg (total weight above the platform)
Centre of gravity / off-centre loading	Assessed against the customer's load configuration
Host communication	Network cable connection
Working platform	1400 × 800 mm
Base	1600 × 1500 mm
Equipment net weight	160 kg
Minimum height at indicated reference points	590 mm
Motion height at indicated reference points	670 mm
Product power	2.4 kW
Supply voltage	AC 220 V
Phase / frequency	Single-phase / 50 Hz
Packing dimensions	1660 × 1560 × 950 mm
Gross packed weight	280 kg

Heights refer to the indicated drawing points, not the overall height from the floor or the highest point during motion. Allow for feet, payload height, maintenance and guarding space.

During operation, we recommend keeping an approximately 1 m zone around the motion envelope clear of people. This is a personnel-clearance recommendation; the installation footprint must still be confirmed for the platform, mounted payload and actual range of motion.

Confirm these three points before upgrading.

01 / MECHANICAL

Fit and load capacity

We supply a complete six-DOF platform with an upper mounting deck. A plated deck or open frame can be supplied with provision for mounting holes. Upper mounting-hole details are provided after contact; cockpit dimensions, fixing points and load conditions define the mechanical interface.

02 / SOFTWARE

What data can your simulator provide?

A network cable connects the platform to the host. Customer software outputs real-time pose and time data. We provide motion-control algorithms, interface documentation and example calls. Protocol, data format, time definition, coordinate conventions and transmission rate are confirmed during integration.

03 / COMMISSIONING

Coordinate visuals and motion

Agree motion-cue objectives, limits and commissioning scope for the payload and application, then arrange system integration and acceptance.

Customer software: real-time pose and time→Algorithms, interfaces and example calls→Platform control system→Six-DOF motion

Connect the host by network cable and integrate using the supplied algorithms, interface documentation and examples. Control prioritises real-time pose response; requested angles or displacement outside the available range are limited to executable values.

INSTALLATION & PROTECTION

Confirm the fixing method, understand limits and stop protection.

Base fixing and levelling

The base can be secured with expansion anchors. For a small, low cockpit without significant centre-of-gravity offset, assessed load and installation conditions may allow support on levelling casters without anchors. Adjust their support feet fully to prevent base movement during operation. Confirm the fixing method against the customer's load configuration.

Control-cabinet emergency stop

An emergency-stop button on the control cabinet stops platform motion in an emergency.

Algorithmic motion limits

Host angle and displacement commands are range-limited. Commands beyond the executable range are clamped, with priority given to real-time pose response within the available workspace.

Overload and fault stop

On overload or a platform fault, an audible alarm sounds and motion stops.

Power-loss descent

On sudden power loss, the platform slowly descends to its lowest position.

Confirm the supply scope and integration work together.

Standard supply is one complete six-DOF platform, including control hardware, commissioning software and control-interface documentation. Mechanical mounting and software integration with the customer's cockpit require coordination.

Platform hardware

Mechanical and electrical equipment

One complete six-DOF platform, including the mechanical structure, six electric actuators, controller, drives, control cabinet, cables, emergency stop and commissioning software.

Control documentation

Algorithms and interface support

Motion-control algorithms, interface documentation and example calls are supplied for customer integration using real-time pose and time data.

Customer system

Cockpit and simulation equipment

The customer provides cockpit mounting requirements. The mounting surface may be plated or an open frame with prepared fixing holes. The cockpit, displays and operator controls are not part of the platform's standard supply.

Mounting surface matched to the customer's cockpit

Choose a plated deck or open frame, with fixing holes prepared to an agreed mounting drawing. Upper mounting-hole details are supplied after contact. Provide cockpit dimensions, fixing points, total weight above the platform and centre-of-gravity information to assess installation against the 300 kg load and customer load configuration.

Lead time

Approximately 3 weeks; the starting conditions and delivery date are confirmed in the order.

Factory testing

Software, hardware and overall operation are checked before dispatch.

Installation and training

A user manual is supplied. Remote guidance for on-site installation and operating training are available when needed.

Warranty and upgrades

One-year hardware warranty. Standard new software features may be provided as free upgrades; confirm applicable terms with our sales team.

Remote diagnostics

Remote troubleshooting assistance is available; overseas on-site service is not currently provided.

[TELL US ABOUT YOUR SIMULATOR](#)

Already have a simulator, or developing new dynamic equipment?

Tell us the application, payload dimensions and total weight, installation space and existing software interface so we can assess platform selection and integration.

This website presents selected multi-axis motion platform models and applications, rather than our full product range or all available configurations. If you cannot find a suitable model, contact us with your payload, motion range, installation space and application requirements. We can help recommend a suitable product or develop a custom solution for your project.

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