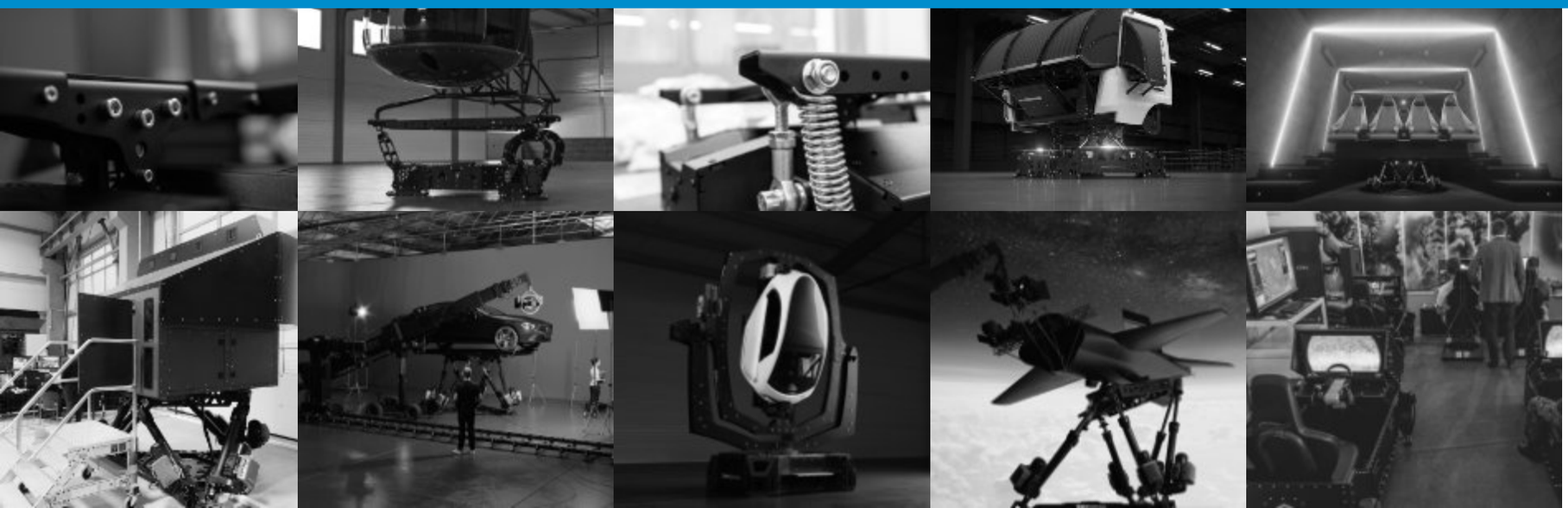
MotionSystems



MOTION SYSTEMS

Always one step ahead!

Motion is just the beginning

Motion Systems, located in Poland, has been designing and producing motion platforms and simulator components for a decade. Since establishing the company, we provide our customers with innovative professional motion systems. Our platforms offer top-notch performance and unique design which has placed us in a group of trusted partners for professional applications both in Poland and internationally.

Who we are

The idea for establishing Motion System was born out of passion for racing sports of its founders. In 2009, Michał Stanek and Paweł Koczan used their experience and knowledge in the field of mechanics, electronics and software engineering to build the first innovative motion system.

We are a young and dynamic organization with great ambitions. Working on our own technology, we are gradually creating our position on the international market. Our R&D works based on our own ideas and careful observation of the markets enable us to constantly increase the range of sales volume and product portfolio.

For the last 10 years we have built a team of more than 60 qualified specialists in which 50% of them are running the R&D activities.

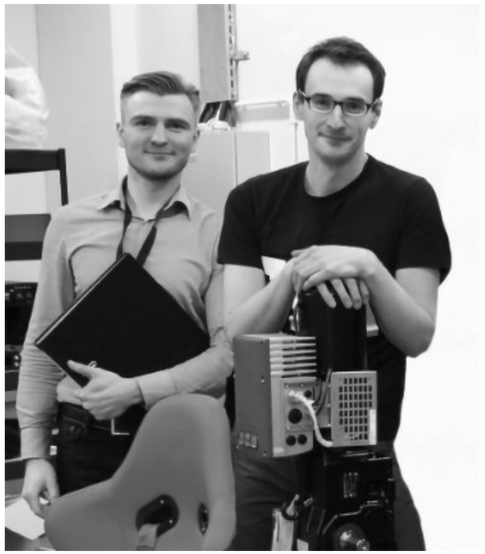
What we do

Over the years, we have developed our own technology and style that have had a significant impact on the European and global market for professional motion simulation.

The position of our company as the industry leader is confirmed by the number of our international customers. Until the end of 2019 we provided more than 10 000 motion related solutions.

Our market position has been strengthened by our own comprehensive motion systems design and software, production and development facilities and professional customer service.

Across the international market, we support a range of companies from small-scale to large industry leading global corporations. Regardless of the size and scope of the project, we put the same amount of attention into every detail and activities we deal with.



Our mission

Our mission is to transfer proven and professional solutions from specialized training centers for everyone who want to be trained.

We believe that in the era of groundbreaking changes in training systems using VR/AR/MX goggles, motion became necessity, not a luxury.

Michał Stanek, CEO

6 Things

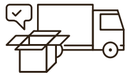
We would like You to know.

Safety. Reliability. Durability.

Safety always comes first for us. Reliability and durability are next. Our products are safe by design, reliable due to unique software and durable due to selected components.

Save Customer's Time

Only one line of code is necessary to integrate motion platform with your Unity/Unreal project. Complete manual will guide you trough the rest of fine tuning process.



Plug & Play

Just install the software, connect motion platform and you are ready to go. Our software supports more than 60 games including various racing and flight simulator software. It is pure plug and play, just a few clicks and everything is configured.

Flexible and Agile

Our R&D is an agile team, with our design process being focused on customers needs. This allows us to create prototypes within the short notice period and to bring products to customers in weeks instead of months.

Simple and Clever

We design all our products, both hardware and software related, using latest trends in UX to make sure that they are easy and intuitive in use without sacrificing any functionality.

Ahead of the Competition

Introducing adventurous solutions such as seat mover, traction plus and VR HeadWay we help our customer to be always one step ahead.

OUR STORY

2009 – 2012

- First Motion Simulator Prototype
- Working on real time µControllers

2013

- Company move to Wroclaw Technology Park
- First product presentation on international military exhibition in Kielce - MSPO

2014

- Updating and extending product range - 2 DoF, 3 DoF and 6 DoF motion platforms offers better performance, neat look and polished details
- Establishing strategic partnership with German drive systems provider Getriebebau NORD
- New distinctive metal sheets design style

2015

- New compact motion platform such as the HS-201 Seat Mover (Next Level Racing Motion V1)
- First FNTP II certification
- Strategic partnership and global distribution agreement with Next Level Racing
- Introduction of Motion Systems professional series

2016

- Technology development lead into HS-202 and later HS-203 introduction
- First 6 DoF motion system delivery for one of the biggest Germany SFX producer
- Starting R&D on Traction Plus system
- Motion Systems is a strong player on motion platforms market

2017

- VR HeadWay technology development. Motion compensation functionality makes our platforms systems the only fully integrated VR products on the market
- Professional Full Cabin Truck Driver Simulator TS-10 development is the biggest R&D Motion Systems project
- Launching the first high performance Linear Actuators Stewart Platform

2018

- TS-10 - comprehensive certified truck/bus driver simulator introduction
- First linear actuator platform PS-6TL-1500 used for defense training application, introducing Motion Systems to a group of trusted technology suppliers for defense market
- Small Linear Actuator first product batch goes into sale

2019

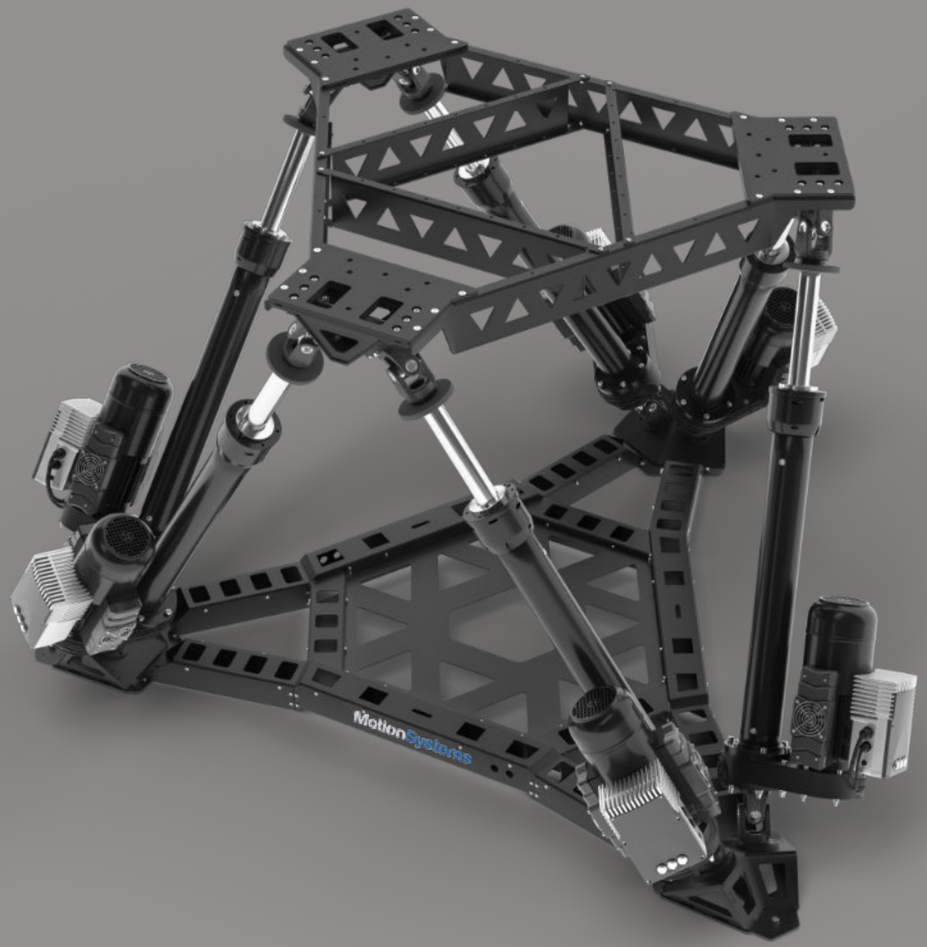
- MIL series and Traction Plus platform serial production launch
- Strong appearances on international simulation and defense exhibitions
- Partnership with Bohemia Interactive Simulations
- Partnership with Military University of Land Forces in MIL series requirements shaping

2020+

Always one step ahead!

- Continuation of product portfolio development
- Software development work: adding new features, more games and advanced functions
- Introduction of dedicated tools for equipment testing, new original simulation and entertainment motion systems
- Enlarging the offer with training devices like TS-10

MOTION SERIES.



PS LINE | EXCELLENCE IN MOTION.

The professional series is dedicated to customers who expect the highest quality, reliability and precision in movement. PS products are perfect for professional training or entertainment applications. Its unique presence fits perfectly into the most state-of-the-art projects.

PS–3ROT–150

PS–3ROT–150 is the comprehensive and unique simulation solution offering unlimited rotation in 3 axes. Cutting edge technology provides outstanding performance and responsiveness necessary to create a truly immersive experience. The device is delivered with a fully equipped modular cabin.

Applications

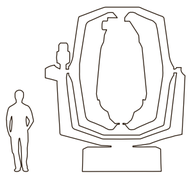
- Gyroscope VR Training for Pilots
- Rotary and fixed wings
- 360 motion VR trainer
- Space travel simulator
- The most demanding entertainment experience
- A fast one-man submersibles simulation, diver propulsion vehicle simulation

Features

- Unlimited rotation around the longitudinal, vertical and lateral axes
- Closed and fully equipped ventilated cabin
- Built in high resolution head up display projection system with PC
- VR headset support
- Modular Human Machine Interface design
- Networking capabilities using universal external communication interface supporting Ethernet and USB

MOVEMENT PERFORMANCE ALONG THE AXIS

LONGITUDINAL	Max angular movement speed: 90° / sec; Max angular acceleration of motion: 30° / sec²;
LATERAL	Max angular movement speed: 90° / sec; Max angular acceleration of motion: 30° / sec²;
VERTICAL	Max angular movement speed: 60° / sec; Max angular acceleration of motion: 30° / sec²;



GENERAL SPECIFICATION

Architecture: 3 Rotational Degrees of Freedom

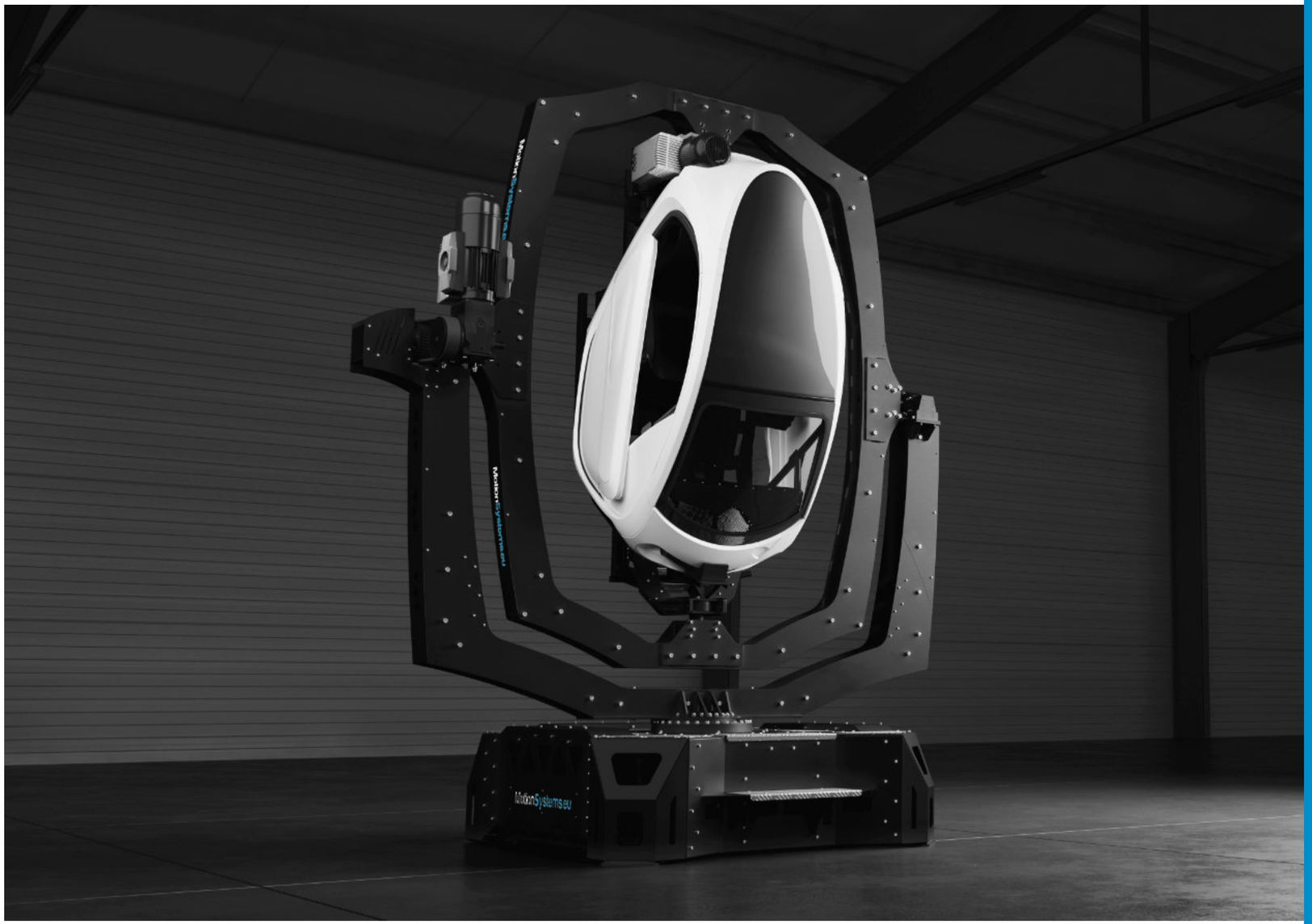
Payload: 150 kg

Power supply requirements: Dual 230 VAC

Maximum power consumption: up to 7 kW

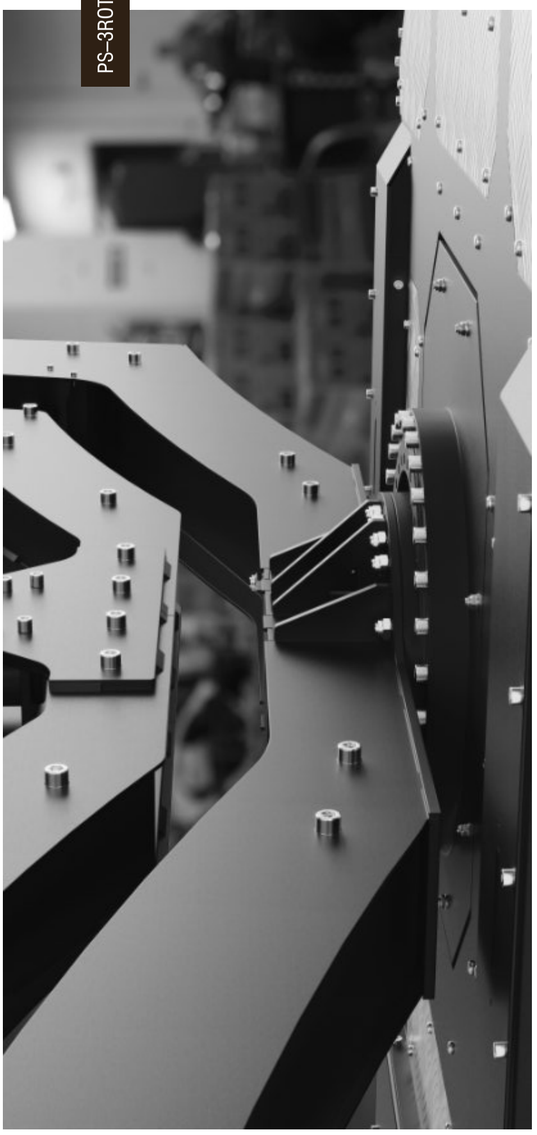
Dimensions: 280 cm x 310 cm x 360 cm

Weight: 1300 kg



The PS-3ROT-150 is unique solution on professional simulation and entertainment market. Three degrees of unlimited 360 rotation offers unprecedented possibilities for professional simulation systems and uncommon experience for entertainment market.

Cabin with specially design Head-Up Display, modular Human Machine Interface equipment, VR headset and powerful PC allows content developers to push the limits of simulation and entertainment experience.




MotionSystems.eu

PS–2RM–150

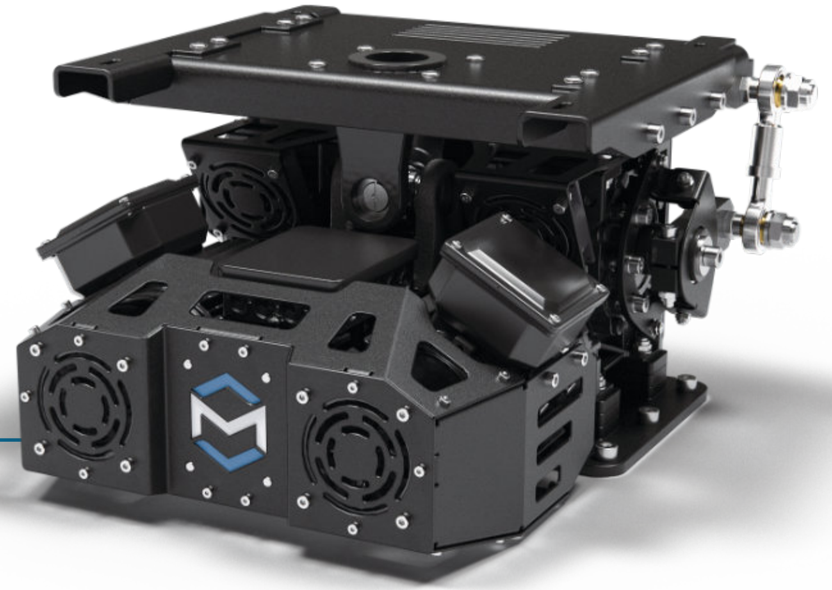
PS–2RM–150 is a professional machine with two degrees of freedom, dedicated for use under the seats or moving floor application 150 cm x 150 cm. The small footprint, self-breaking gears and simple, reliable design allow the machine to be used for many applications dedicated to professional simulation, image stabilization and entertainment.

Applications

- Single user VR application - standing position available
- Heavy load entertainment application
- Testing and verification applications
- Heavy weight seat mover
- UAV operation support - landing pad

Features

- Reliability
- Great dynamics and performance
- Small footprint
- Low profile
- Low weight
- Compact design easy to build in
- Low power consumption
- Extremely quiet operation



GENERAL SPECIFICATION

Architecture: 2 Degrees of Freedom

Payload: 150 kg

Dimensions: 52 cm x 43 cm

Power supply requirements: 200-250 VAC Single Phase

Max power consumption: 1,5 kW

Minimum height: 29 cm

Weight: 63 kg

Pitch: ±13°

Roll: ±10°

PS–3TM

1000/550/350

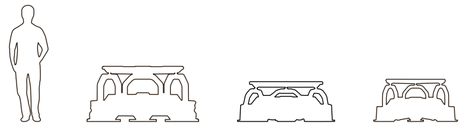
The PS-3TM machines family was designed for most heavy duty load application where customer requires reliability up to 100 000 working hours. This gives us possibility of offering service support in machine full life cycle up to 10 years.

Using drive technology makes this products one of the most silent solution available on the market. Self stabilization and unprecedented precision offers wide range of possible applications - starting from single trainee up to crew simulation. Smoothness and movement repeatability make it great testing and verification tool.

Excellent customers feedback follows from it for its reliability, compact design and impressive performance. The proven and balanced allows easy integration and failure-free operation in the most difficult applications.

Family general features

- Reliability, gear lifetime up to 10 years of operation
- Global technical support
- Extremely quiet operation
- Possible application with free walk top floor
- Ability to generate continuous vibrations
- Safe mechanical design resistant to electronic failures
- Electromagnetic safety brakes for motor shafts
- Safety Integrity Level up to 3
- Impressive dynamics and performance
- Low weight
- Compact design
- Extremely quiet operation
- Smooth operation for the entire movement envelope
- Incredible movement repeatability
- Great for industrial testing and verification



3 DEGREES OF FREEDOM

Applications

PS–3TM–1000

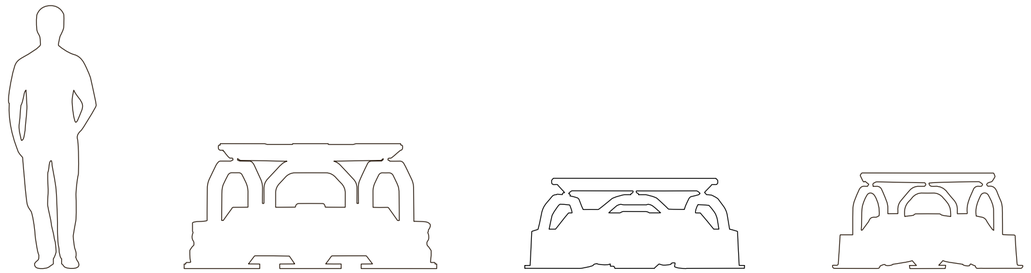
- Virtual reality up to 6 persons
- Medium size cockpit simulation systems (land, speed boats, flight)
- Small size full cockpit simulation systems with visualisation system
- Squad training simulation systems with free trainee movement
- High load entertainment systems for 5 person

PS–3TM–550

- Small and medium size cockpit simulation systems (land, speed boats, flight)
- Small size full cockpit simulation systems
- Virtual reality up to 4 persons
- Vehicle Cabin Simulators for up to 2 crew members
- High load entertainment systems for 2 people

PS–3TM–350

- Small size open cabin simulation systems (land, speed boats, flight)
- Virtual reality up to 2 persons
- High load entertainment systems for 1 person
- Good self stabilization



	PS–3TM–1000	PS–3TM–550	PS–3TM–350
PAYLOAD	1000 kg	550 kg	350 kg
POWER SUPPLY REQUIREMENTS	400 VAC Three Phases	200-250 VAC Single Phase	200-250 VAC Single Phase
MAX POWER CONSUMPTION	6,5 kW	5,5 kW	5,5 kW
DIMENSIONS	164 cm x 144 cm	155 cm x 144 cm	131 cm x 115 cm
MINIMUM HEIGHT	66 cm	61 cm	53 cm
HEAVE	33 cm	30 cm	26 cm
PITCH	-24° +22°	-22,5° +24,8°	-21,5° +24,7°
ROLL	+/-19,2°	+/-20,1°	+/-20°
WEIGHT	595 kg	390 kg	260 kg

PS–3TM–LP550

The PS–3TL–LP550 is our 3 DoF low-profile product, which is adapted for installation of medium size cockpits and cabins. This is great and safe solution for everyone who needs impressive dynamics and performance in professional training or entertainment.

Applications

- Virtual reality for entertainment for 2 persons
- Small up to medium cockpit simulation systems
- Industrial testing
- Land vehicle simulation

Features

- Reliability
- Compact design
- Safety Integrity Level up to 3
- Impressive dynamics and performance

GENERAL SPECIFICATION

Architecture: 3 Degrees of Freedom

Payload: 436 kg

Dimensions: 185 cm x 160 cm

Power supply requirements: 200-250 VAC Single Phase

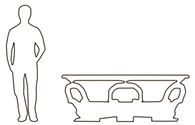
Max power consumption: 5,5 kW

Weight: 550 kg

Heave: 31 cm

Pitch: -12° +13,7°

Roll: ±11°



PS–6TM

2500/1500

The PS–6TM–1500 and 2500 machines are the most popular products from the 6 DoF family used in professional applications. Customers appreciate them for their reliability, compact design and impressive performance. The proven and balanced design allows machines to work flawlessly in the most difficult systems, dedicated to industry training and mass entertainment.

Family general features

- Reliability
- Gear life up to 10 years of operation
- Extremely quiet operation
- Good resistance to momentary overload caused by dynamic change in mass distribution
- Technical support for key machine components around the world
- Modular design enabling transportation and assembly on site from the main components
- High ability to generate vibrations
- Safe mechanical design that excludes permanent damage
- High performance

6 DEGREES OF FREEDOM

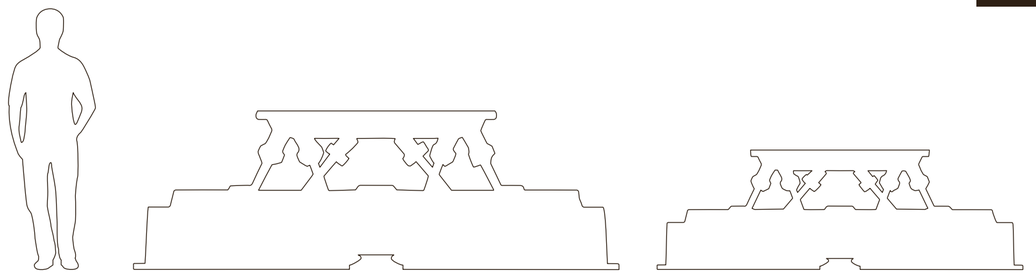
Applications

PS–6TM–2500

- Virtual reality up to 10 persons
- Big size cabin simulation systems with visualization (land, speed boats, flight)
- Certified Full Mission Simulation system with full cockpit and visualization system
- Full Squad training simulation systems with free trainee movement
- High load entertainment systems for up to 8 persons
- Testing and verification application for full vehicle configuration
- SFX production using serial vehicles up to 1700 kg
- SFX production with specially prepared vehicles up to 2500 kg

PS–6TM–1500

- Virtual reality up to 8 persons
- Big size cabin simulation systems (land, speed boats, flight)
- Certified Full Flight Simulation system with full cockpit and visualization system
- Full Squad training simulation systems
- High load entertainment systems for up to 6 persons
- Testing and verification application any vehicle and light automotive configuration
- SFX production using serial vehicles up to 1000 kg
- SFX production with specially prepared vehicles up to 1500 kg



	PS–6TM–2500	PS–6TM–1500
PAYLOAD	2500 kg	1500 kg
POWER SUPPLY REQUIREMENTS	400 VAC Three Phases	400 VAC Three Phases
MAX POWER CONSUMPTION	13 kW	13 kW
DIMENSIONS	278 cm x 240 cm	253 cm x 221 cm
MINIMUM HEIGHT	110 cm	83 cm
HEAVE	36 cm	32 cm
PITCH	-25.5°+23°	±25°
ROLL	±20.5°	±22°
WEIGHT	1270 kg	1145 kg
YAW	±32°	±24°
SURGE	-35 cm + 36 cm	±23 cm
SWAY	±32 cm	±24 cm

PS–6TL–1500

The PS–6TL–1500 is our 6 DoF product based on a Stewart platform, which provides highest level of motion sensation and matches unique requirements of our customers.

Applications

- Military vehicle simulators
- Rotary and fixed wing flight simulators
- Car and truck driving simulators
- Mining vehicle simulators
- Naval ship simulators
- Advanced research, testing and university simulators
- Film industry (including camera stabilization)
- Virtual reality simulators for entertainment
- Satellite, telescope and antenna positioners
- Industrial testing
- Autonomous vehicle testing

Features

- Outstanding motion dynamics without any backlash
- Higher angle of “yaw” and greater ranges of “surge” and “sway”
- Cost-effective operation and high reliability
- Greater rigidity of the platform construction
- Global service support, up to 10 years extended warranty
- Huge working envelope for most demanding applications
- Impressive PITCH and ROLL, accelerations up to 1 G
- Modular design, possibility of on site assembly, modular spare parts
- Easy to reconfigure design allows to adopt solution for customer needs - short / long version

GENERAL SPECIFICATION

Architecture: 6 Degrees of Freedom

Payload: 1500 kg

Dimensions: 251 cm x 227 cm

Power supply requirements: 400 VAC Three Phases

Max power consumption: 13 kW

Minimum height: 128 cm

Weight: 950 kg

Heave: ±37 cm

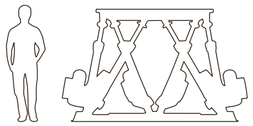
Pitch: -31+27°

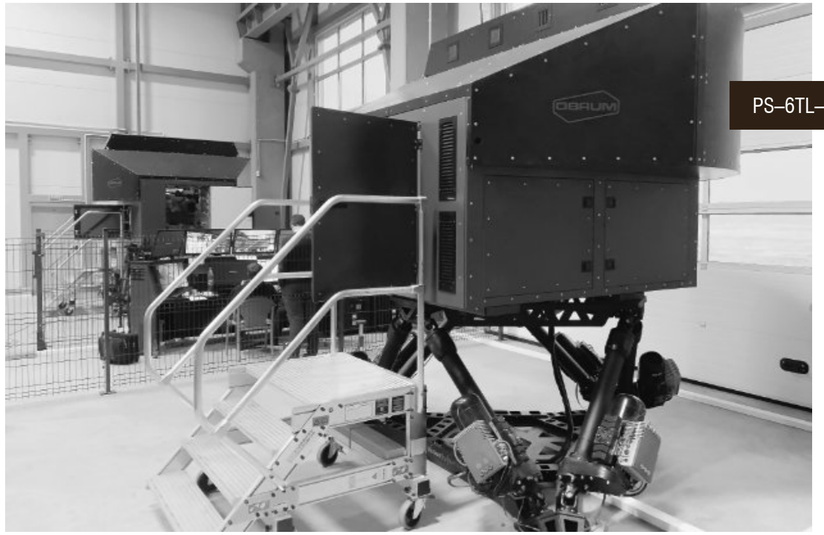
Roll: ±24°

Yaw: ±51°

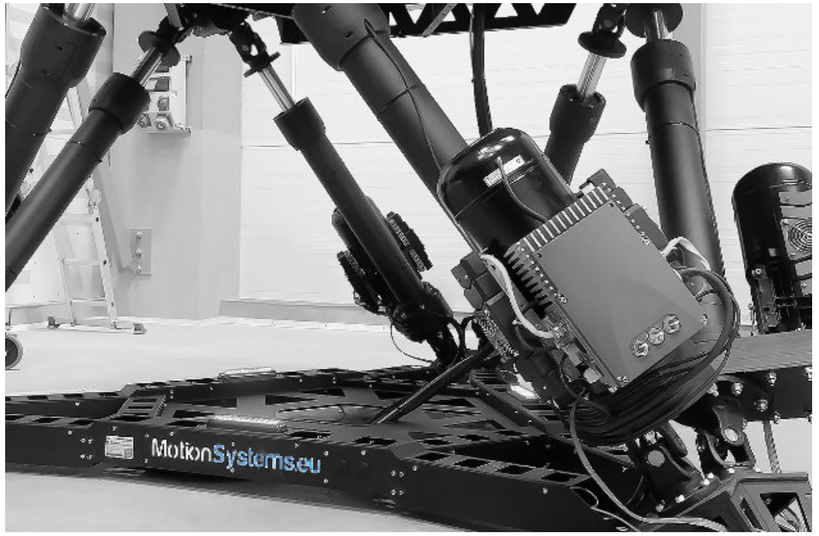
Surge: ±87 cm

Sway: ±64 cm





PS–6TL–1500



PS–6TM–550

The PS–6TM–550 platform is the perfect product from the 6 DoF family used in professional training and entertainment. Customers choose it for its low profile design, powerful engine and reliability which are necessary features in the construction of small and medium cockpits and cabins for simulation.

Applications

- Virtual reality for entertainment up to 4 persons
- Small up to medium flight simulators
- Industrial testing
- Land vehicle simulation

Features

- Gear life up to 10 years of operation
- Extremely quiet operation
- Good resistance to momentary overloads resulting from dynamic change in mass distribution
- Technical support for key machine components around the world
- Modular design enabling transportation and assembly on site from the main components
- High ability to generate vibrations
- Safe mechanical design that excludes permanent damage
- High performance

GENERAL SPECIFICATION

Architecture: 6 Degrees of Freedom

Payload: 550 kg

Dimensions: 160 cm x 144 cm

Power supply requirements: 200-250 VAC Single Phase

Max power consumption: 3 kW

Minimum height: 54 cm

Weight: 460 kg

Heave: 25 cm

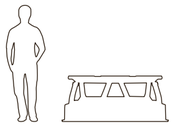
Pitch: ±16°

Roll: ±15°

Yaw: ±15°

Surge: -15÷17 cm

Sway: ±15 cm



PS–6TM–150

This machine is the smallest 6 DoF in professional series. It is the most compact, but yet powerful and reliable unit greatly applicable into single applications for simulation and entertainment. Smooth movement with impressive angles gives a lot of possibilities in testing and verification for industry purposes. Thanks to VR HeadWay, PS–6TM–150 works easy and perfectly with even home use VR.

Applications

- Virtual reality for entertainment and simulation for 1 person
- Industrial testing

Features

- Reliability
- Safe mechanical design that excludes permanent damage
- Higher performance in compact and mobile chassis
- Compact design and easy to transport
- Low profile in parking for transport and load
- Impressive angles for pitch: ±36°

GENERAL SPECIFICATION

Architecture: 6 Degrees of Freedom

Payload: 150 kg

Dimensions: 127 cm x 114 cm

Power supply requirements: 200-250 VAC Single Phase

Max power consumption: 4,3 kW

Minimum height: 33 cm

Weight: 305 kg

Heave: 21 cm

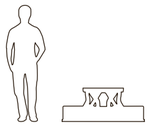
Pitch: ±36°

Roll: ±28°

Yaw: ±26°

Surge: ±13 cm

Sway: ±11 cm



PS–SB230/400

The PS–SB230 and PS–SB400 are power cabinets designed and build internally make all presented motion platforms as characteristic as possible. Equipped with proprietary design electronics and software the switch box is responsible for power distribution and acts as safety and control device. It contains AC and DC fuses, handles remote safety switches and provides power to inverters and motion controller. Design of cabinets allows integrators to achieve security measures CL class up to SIL 3 if required.

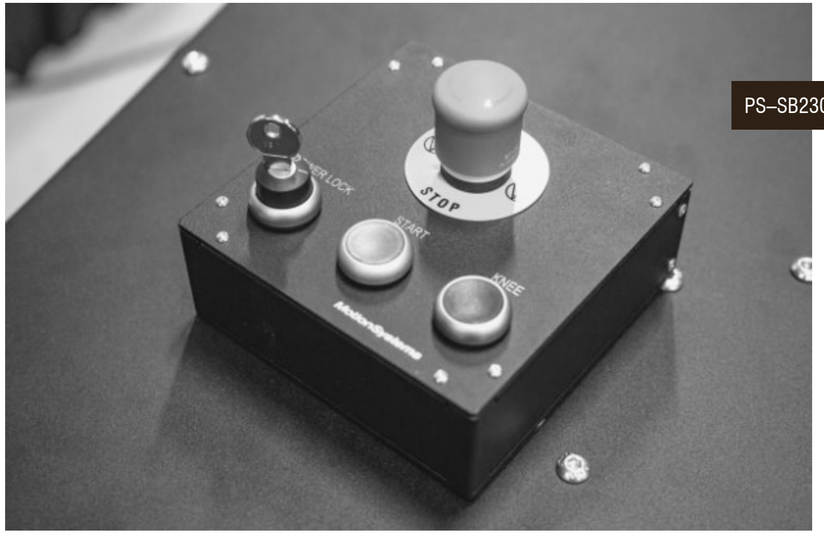
Additional remote control unit is provided for operator convenience and safety. It allows to start the motion platform, park and stop it immediately in case of emergency situation.

Power Cabinet (switch box) contains

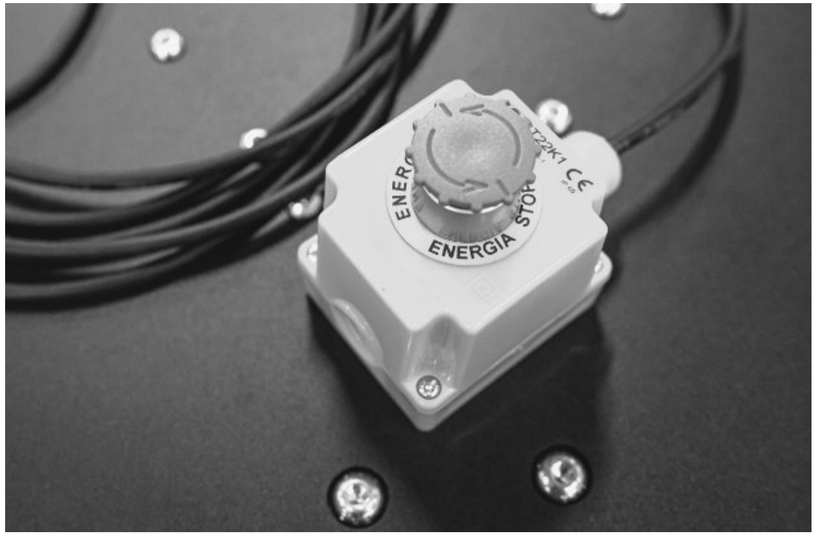
- Power switch
- Fuses and voltage indicators
- Start button
- Safety stop button
- Uptime indicator
- CAN/USB/Ethernet sockets
- EMCY1 and EMCY2 sockets
- Remote socket
- AUX socket
- Logic socket

Remote Control Unit contains

- Key power lock
- Start button
- Knee button
- Emergency switch



PS–SB230/400



TS–10

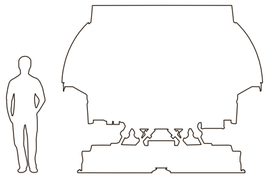
The TS-10 is one of the most advanced driving simulation system available. It allows to conduct training truck and bus drivers in special conditions according to regulation of Polish Ministry of Infrastructure. Professional proprietary software platform, thanks to precise and powerful physics engine, allows to recreate the most sophisticated scenarios that may happen on the road. Its modular design and compact size make it suitable to be installed both in a small room spaces and in single unit 2-axle truck (FHWA class 5 vehicle).

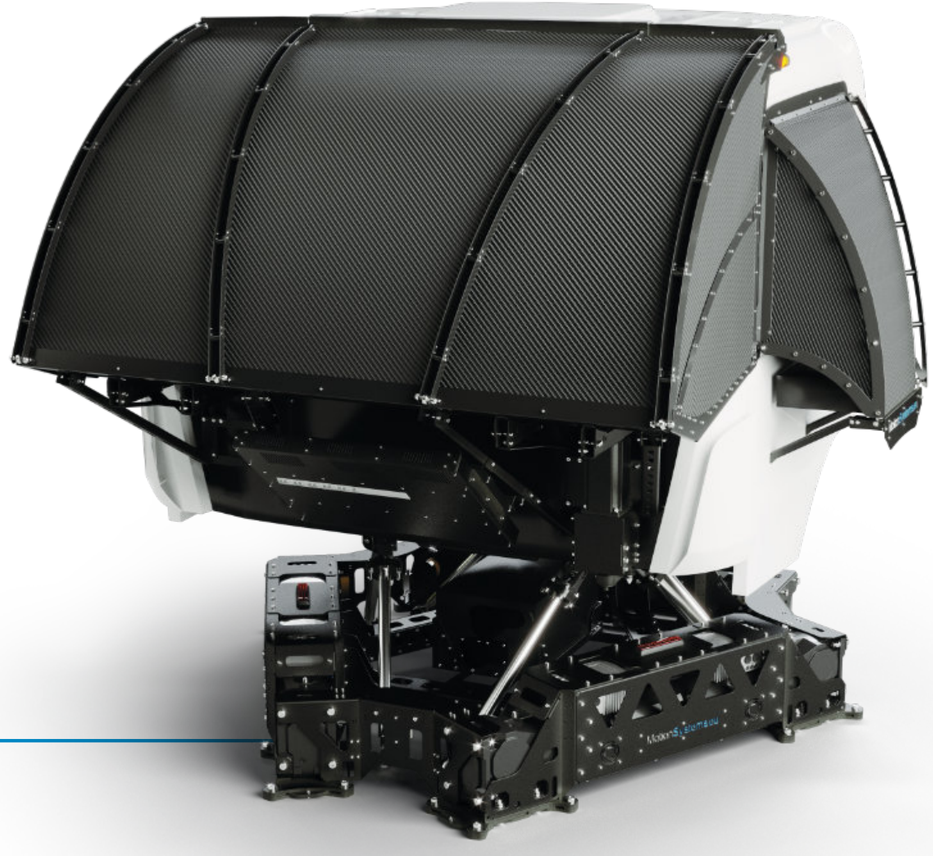
Simulation Software Features

- Dynamic model of different trucks, semi-trucks and buses with basic parameters real-time adjustment: tyre pressure, load of vehicle with passengers or goods, acceleration, braking, running resistances, dry cargo, liquid cargo for truck with a tank container
- Skidding of one or several wheels with simulation of different levels of adhesion between road and tyre, puddle and potholes
- Comprehensive tire traction model
- Full range of different engines models to choose for vehicle with 6 speed manual gearbox, 8 speed manual dual-gearbox and 9 and 12 speed automatic gearbox
- ABS, ESP, SCA, DPF, tachometer, retarder and selectable all-wheel drive differential locks
- Sound collision avoidance assist function
- Two separate left side mirrors and two separate right side mirrors
- Full lights simulation
- Support for over 20 multifunctions which includes: tyre puncture, brake system failure, retarder power loss, each wheel traction loss and many others

Selected features

- Simulation system dedicated for stationary and mobile use
- Compact design - very small operational dimensions
- Certification - according to Regulation of the Polish Ministry of Infrastructure - 8 April 2011 for the device for driving simulation in special conditions
- System contains map database objects specific to other EU countries
- Cabin of actual truck used offers original Human Machine Interface, original equipment with dashboard with glass cockpit technology
- Original manipulators with force feedback simulation from the vehicle dynamics model
- Supporting subsystems equipped: custom made pneumatic system, tachometer simulation, monitoring, 5.1 audio system with advanced vehicle and environment sound simulation
- Expandable simulation cabin





GENERAL SPECIFICATION

Architecture: 6 Degrees of Freedom

Dimensions: 330 cm x 333 cm x 400 cm

Max power consumption: 26 kW

General spec for trailer version:

Mercedes-Benz Actros 2-axle truck

Vehicle mass: 14500 kg

Dimensions: 950 cm x 380 cm x 252 cm

The instructor is able to change simulation conditions, i.a:

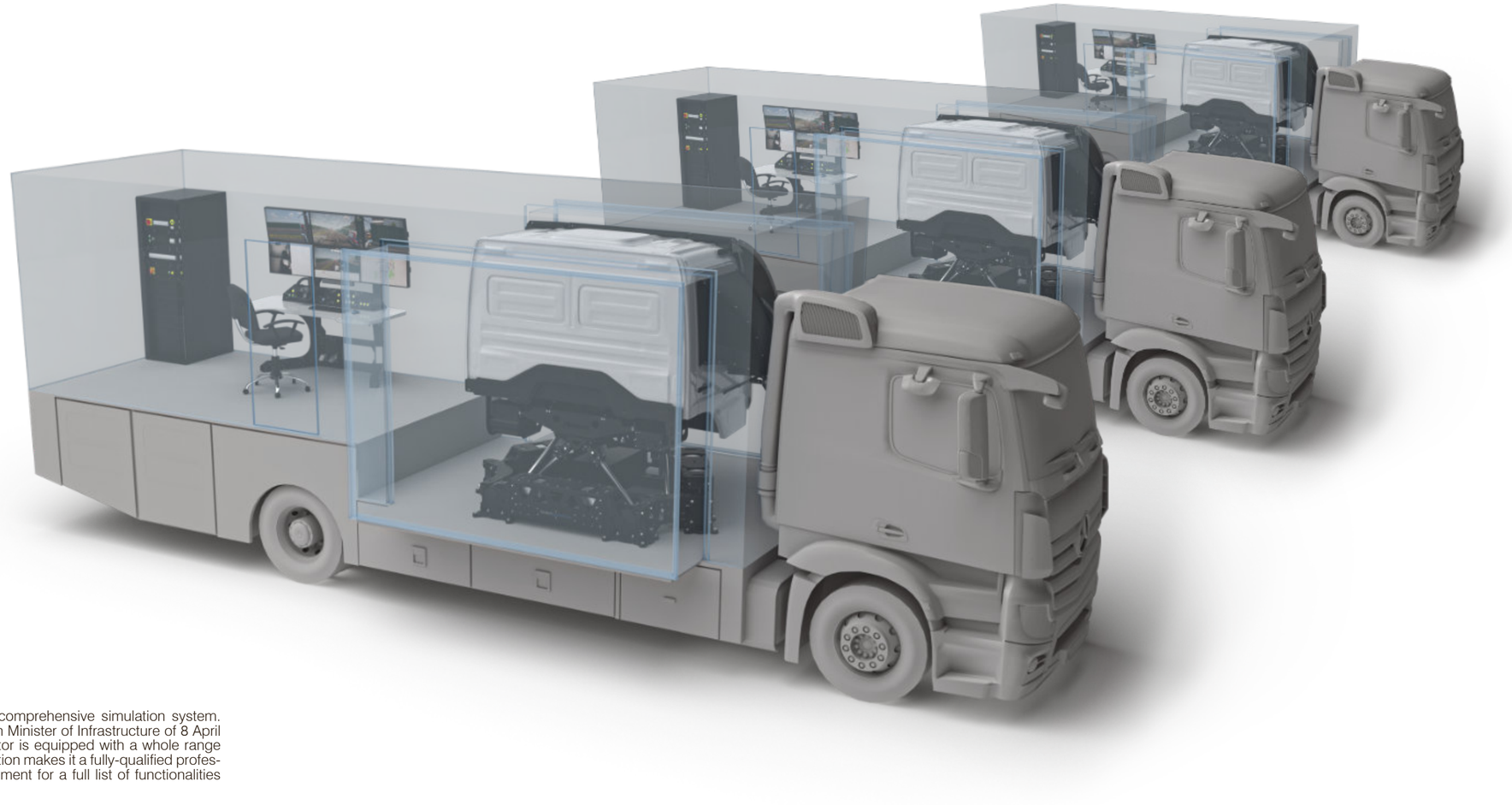
- Traffic density (large vehicles, small vehicles, bikes and motorbikes, pedestrians)
- Dangerous overtaking frequency
- Dynamic skid inducer mode and strength (on advanced training track)
- Water curtain mode (on advanced training track)
- Traffic lights on crossroads (on/off)
- Weather properties including time of the day, Temperature, Precipitation (rain, snow), Fog and wind speed and direction

Basic virtual environment properties

- Over 150 km (93 miles) of highways
- Support for left and right - hand traffic
- Interactive world map with dynamic scenario events
- Dedicated skidpad for advanced training
- Exit slip roads and entry ramps to motorway
- Various sets of road signs depending on the selected country
- Speed limits and road segments through urban areas
- One-way roads, roundabouts, tram lanes, pedestrian crossings, level crossings, bus and tram stops

Instructor stand

TS-10 is delivered with in house designed instructor stand equipped with 6 displays allowing instructor to control simulated vehicle and driver in real time. View of parameters such as actual speed, RPM of the engine, throttle position, fuel consumption of trainee vehicle and monitoring system gives instructor necessary information to validate driver performance. Most of common offenses such as traveling without main lights, driving over a solid line or speed limit exceeding are automatically rated. Equipping the instructor stand with a set of manipulators for driving, allows to expand typical training with unpredictable road situations.



The above catalog presents only a small functionality summary of this comprehensive simulation system. Based on the requirements in accordance with the Regulation of the Polish Minister of Infrastructure of 8 April 2011 of the device for simulating driving in special conditions, the simulator is equipped with a whole range of required functionalities. Compliance with this norm and obtained certification makes it a fully-qualified professional training tool certified for legal use. Please contact our sales department for a full list of functionalities and full technical system parameters.


S7 CARGO

MILITARY SERIES.

MIL LINE | FUTURE OF TRAINING.

Military series products dedicated for users and systems integrators application. Products offer unprecedented flexibility, reliability and mobility in VR training.

RCM–C420

RCM (Reconfigurable Cockpit Module) is a modular, flexible and cost effective training product dedicated for special applications. Its design is based on RVCT (Reconfigurable Virtual Collective Trainer) developed and described by US Military. RCM offers flexibility, encouraging the user to adopt its training hardware according to its fast changing needs.

Applications

- VR and screen virtual training application
- Cross domain tactical and specialist training
- Driver, gunner, commander and many others applications

Features

- Ready to work in just minutes
- Transportable using forklift
- Possibility of using dedicated manipulators and accessories
- Full and native hardware and software integration with the VR set
- Delivered with software management package and plugins
- Linear actuators with slide up to 12 cm

GENERAL SPECIFICATION

Architecture: 3 Degrees of Freedom

Dimensions: 160 cm x 71 cm

Power supply requirements: 230 VAC

Max power consumption: 4,2 kW

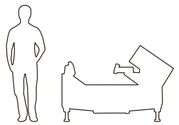
Minimum height: 79 cm

Weight: 180 kg

Heave: up to 12 cm

Pitch: up to ±5°

Roll: up to ±10°



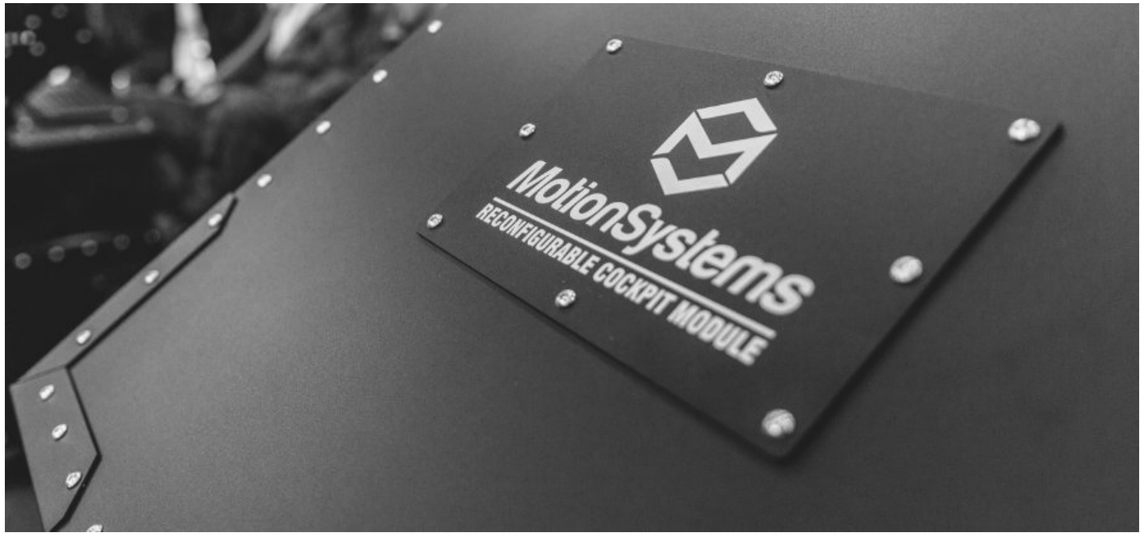
RCM module used in Academy of Land Forces in Wroclaw, has opened new possibility for customer using battle lab application for officers training. Its modularity, native VBS3 support and dynamic motion systems allow instructor to change RCM equipment training set and use it for both trucked and wheeled vehicle simulation.

Combination of 4 RCM units offers possibility of training for variety of land trucked and wheeled vehicles. In combination with computers in battle lab, system is used in scenarios dedicated for both specialist and tactical training.


MotionSystems


0999A
LASER

RCM–C420


MotionSystems
RECONFIGURABLE COCKPIT MODULE

MIL–203–S1/S2

MIL–203–S1/S2 is composed of two products – under seat mover MIL–203 and dedicated seat. MIL–203 is hardened version of our flag entertainment product. Adapted in area of crucial mechanical system components has made our product fully adapted to the demanding military client. This lightweight, small, mobile and impressively powerful set will take your VR training to a higher level.

Applications

- VR and screen virtual training application
- Tactical and specialist training enhancement

Features

- Ready to work out of the box
- Possibility of using dedicated manipulators and accessories
- Full and native hardware and software integration with the VR set
- Delivered with software management package and plugins
- Extremely quiet operation
- Low weight

GENERAL SPECIFICATION

Architecture: 2 Degrees of Freedom – under Seat

Payload: 120 kg

Power supply requirements: 100-240 VAC 50-60 Hz

Maximum power consumption: 2,5 kW

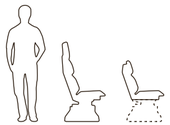
Dimensions: 46 cm x 35 cm x 20 cm

Minimum height: 128 cm

Weight: 28 kg

Pitch: ±10°

Roll: ±10°



MIL–203–S1/S2

QUBIC SERIES.

QS LINE

MOTION IS THE BEGINING.

QUBIC is a product series dedicated to demanding players who require uncompressed and fully professional Simulation experience in affordable budget. Presented products can be used for demanding home application or as entry level for any professional simulation system.

HS–210

HS–210 is designed to provide fresh realism for home motion platforms. The product deliver an unrivaled motion experience: yaw, sway, understeer, traction loss and power slides with breathtaking performance.

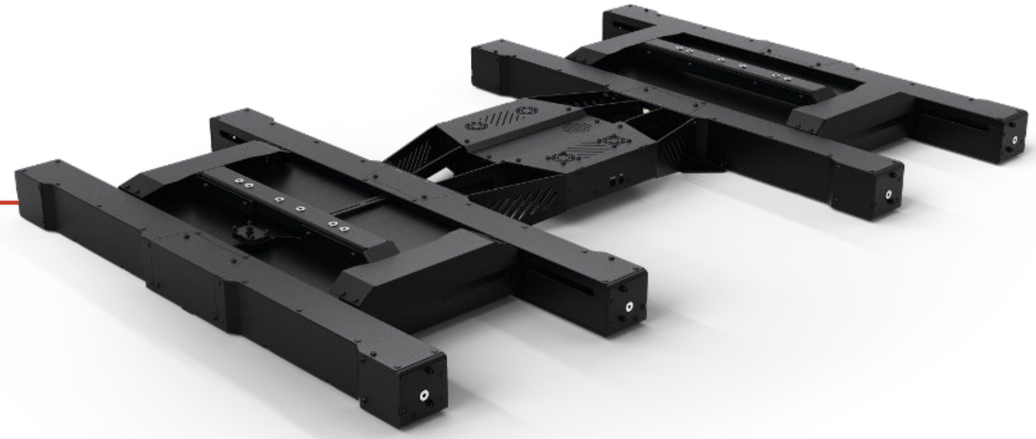
When combined with HS–203 motion platform and other accessories it can deliver an extraordinary simulation experience adding lateral force, longitudinal force, roll, pitch and road surface textures. All together makes it a perfect machine for all racing, flight and VR simulators.

Features

- In set with HS-203 is reliable and cost-effective alternative to 6 DOF motion platforms
- Impressive dynamics and motion envelope
- Direct bolt on to all Next Level Racing®, GTtrack & Flight Simulator Pro cockpits and easy to adapt to 3rd party cockpits
- Quiet, realistic and smooth movements
- Compact design
- Industrial grade components
- Unique design and system configuration

Applications

- Professional SimRacing
- Serious games application for land and air simulation, VR and on screen
- Gaming and entertainment
- Compact flight and racing simulators



GENERAL SPECIFICATION

Power Source: 115-230 VAC

Rated Power: 0,5 kW

Protection Class: I

Max Payload: 235 kg

Ambient Temperatures: -20°C to +60°C

Full Performance Temperatures : +5°C to +35°C

Product Weight: 108 kg

Product Dimensions: 112 cm x 165 cm x 13 cm

Boxed Dimensions:

Box 1 & 3: 115 cm x 54,5 cm x 14 cm

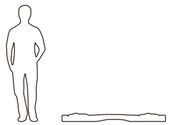
Box 2: 68 cm x 50 cm x 22,5 cm

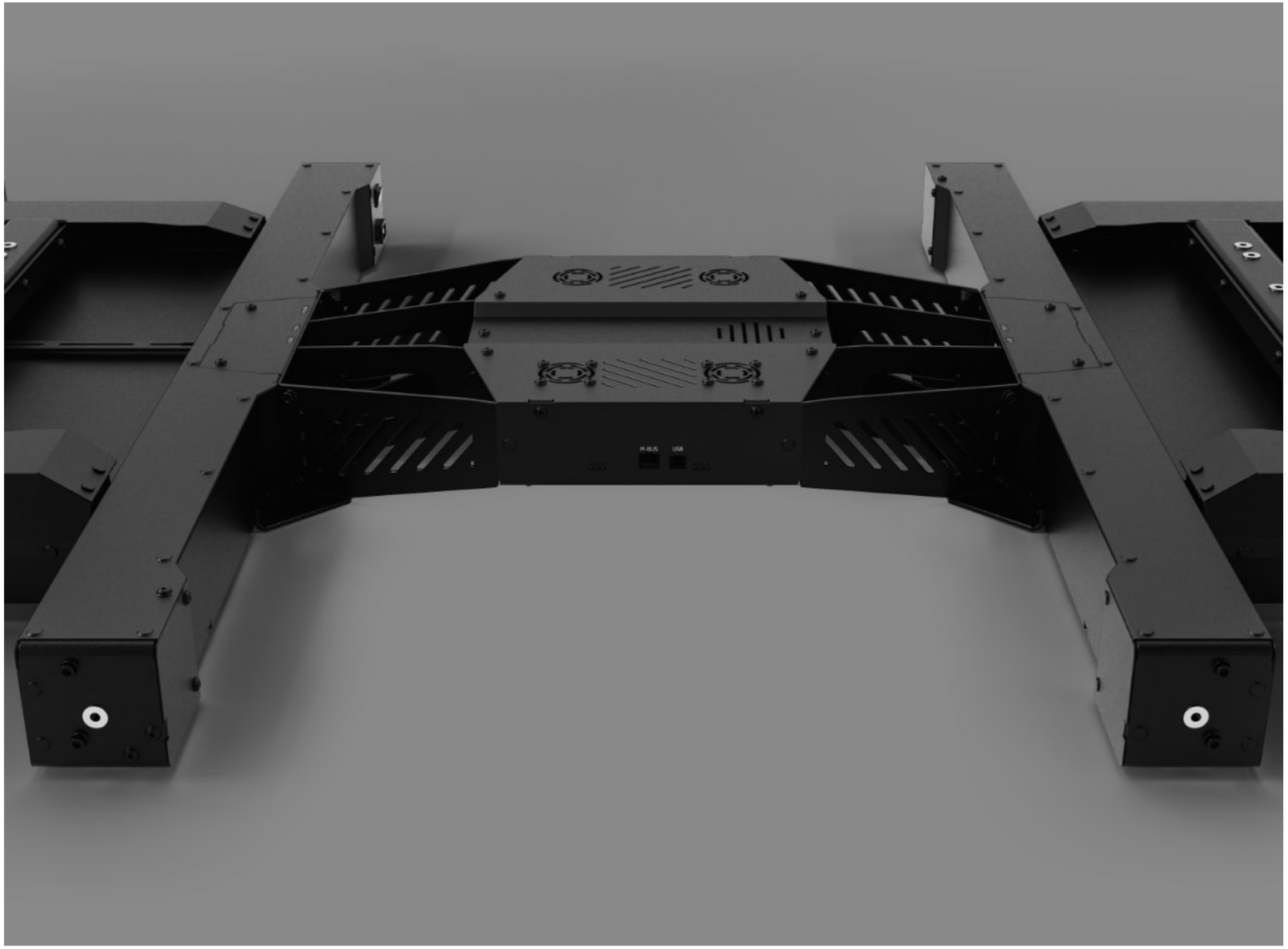
Boxed Weight:

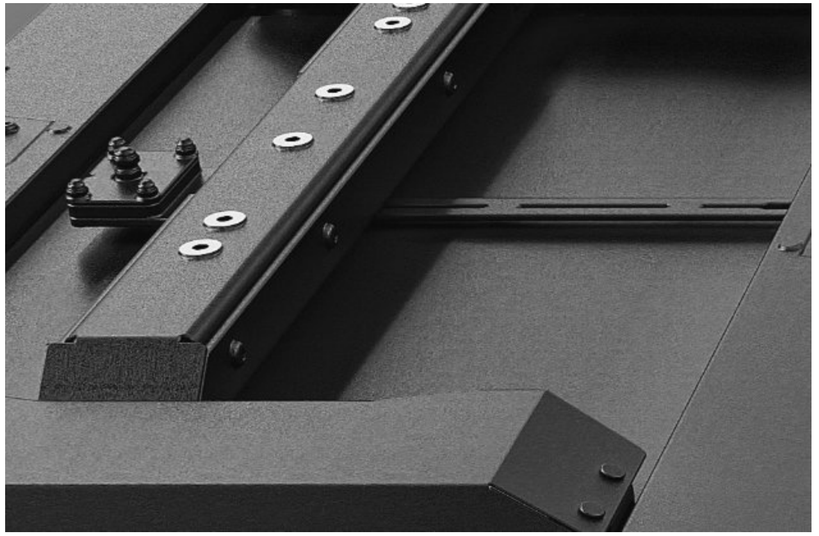
Box 1: 46 kg

Box 2: 26 kg

Box 3: 46 kg







HS–203

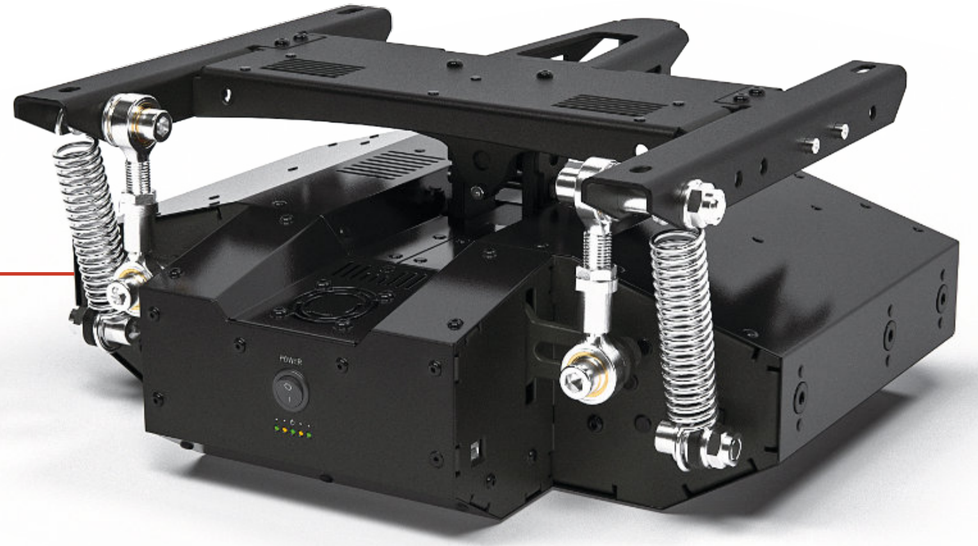
Motion platform HS–203 is a direct successor to HS–202, HS–201 and HS–200. It has been engineered to be faster, more compact and better looking than predecessors. The unit is dedicated for applications where only seat movements are required. It is easier in adapting to 3rd party cockpits than HS–201 and it comes as single block – not as just actuators like in HS–200.

Features

- Compact design
- Realistic, super smooth operation using advanced actuator speed management
- Reduced noise of operation
- Easy to adapt to 3rd party cockpits
- Equipped with Electro-magnetic brakes to block top frame undesired movement when the unit is turned off
- USB plug-in, click and play software with all major racing and flight titles on PC

Applications

- Gaming and entertainment
- Virtual Reality
- Serious games application for land and air simulation VR and on screen
- Therapeutic support equipment
- Professional SimRacing



GENERAL SPECIFICATION

Architecture: 2 Degrees of Freedom

Min. user weight: 30 kg

Max. user weight: 130 kg

Dimensions: 46 cm x 35 cm x 20 cm

Storage temperatures: -20°C to +60°C

Full performance temperatures: +10°C to +35°C

Maximum power consumption: 2,4 kW

Product weight: 28 kg

Max angular displacement for Pitch & Roll: ±10°

Max speed: 20°/s

The Qubic series is designed for customers looking for the best immersion and the most realistic simulation. Products from the QS line will take you to the race track with incredible precision and realism.Take the experience for the next level of Simracing.


POWER

QS–L1

Linear actuator QS–L1 allows you to develop highly realistic applications with detailed motion textures, velocity, engine vibrations and vehicle dynamics.

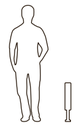
Using our Motion SDK you can integrate several actuators with your software to create realistic simulator that immediately responds to on-screen situations to deliver real-life experience in games or VR applications.

Applications

- Multifunctional training modules
- Virtual reality and simulation
- Customizable motion-related applications - armament recoil
- Cinema multi-person multimedia seats
- Individual motion functional elements
- High precision testing
- Customized Multi–DoF solution
- High speed and precision move application

Features

- Affordable and reliable system
- Extreme - laboratory positioning precision
- Possible mounting arrangements as seat, rig or platform motion system
- Very small footprint
- Low weight
- Possibility of mechanical and software combination of single L1 units



GENERAL SPECIFICATION

Architecture: 2 and More Degrees of Freedom Accordingly to User Configuration

Maximum Velocity: +/- 30 cm/s

Maximum Acceleration: +/- 0,75 G

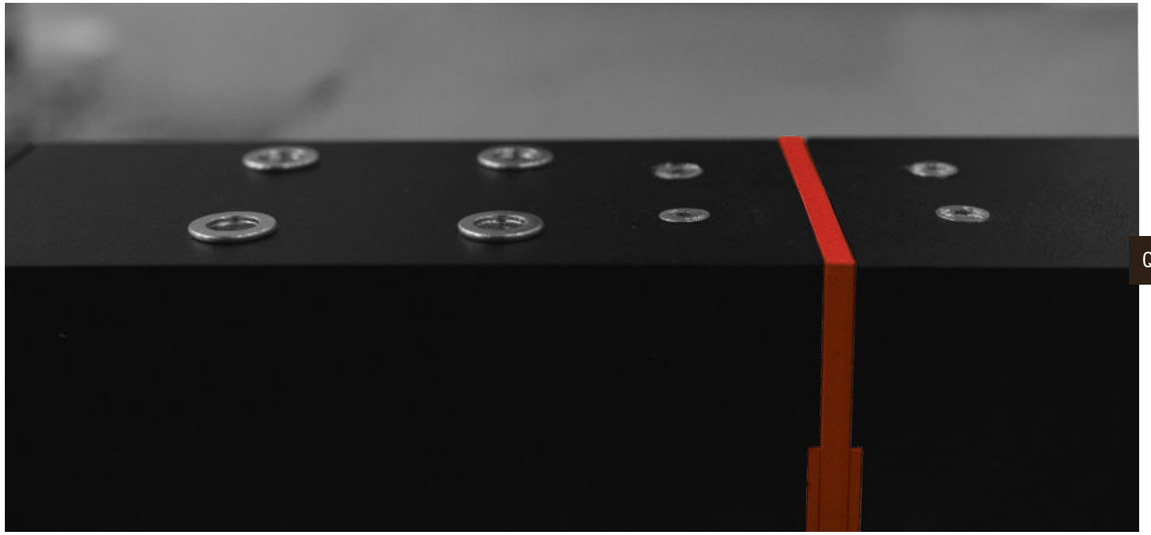
Maximum Payload: 100 kg

Power Supply Requirements per actuator: 115 V/230 V

Dimensions: 9 cm x 9 cm x [47-57] cm

Maximum power consumption: 0,8 kW

Product weight: 7,15 kg



QUBIC SERIES

Accessories

The Qubic line is not only high-quality simulation platforms for SimRacing, but also a wide range of accessories: modular steering wheel, pedals and hand brake. Various accessories significantly increase the functionality of your home or professional Simacing rig. We make sure that they are perfectly designed and easy for adjustment.

Expand or enrich your rig with Qubic system accessories to unlock full potential and train like a professional.

Features

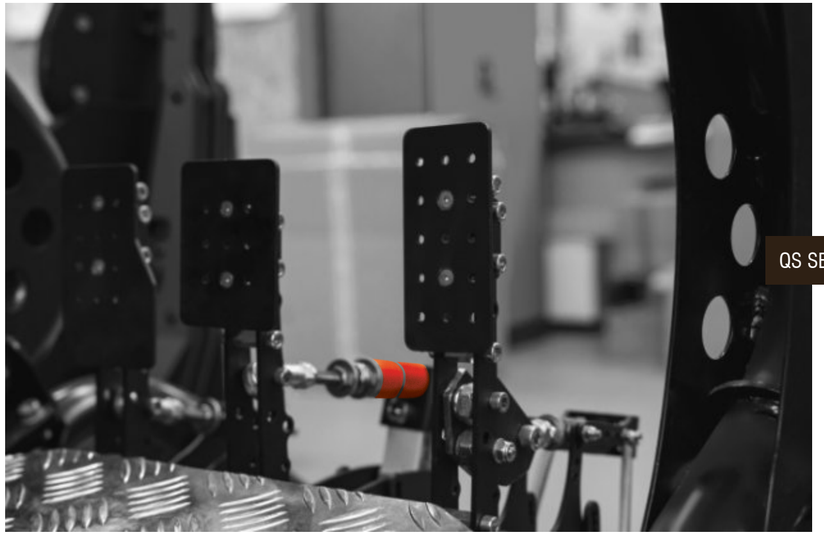
- Realistic and smooth movements
- Compact design
- Match to the most popular cockpits – GT Omega, Playseat, NLR, Rseat
- Constructed of high quality materials (industrial grade components)
- Full software integration
- Plug & Play
- Used in professional certified simulators
- Modular steering wheel
- Possibility of reconfiguration and customization

Applications

- Professional SimRacing
- Driving simulation systems

QS steering wheel is a product designed for the most demanding players and applications. The rim was made of highest quality materials such as carbon fiber, natural leather and alcantara.

The unique combination of professional simulation technology and modern gaming design gives user the opportunity to train and experience real racing.



SOFTWARE.

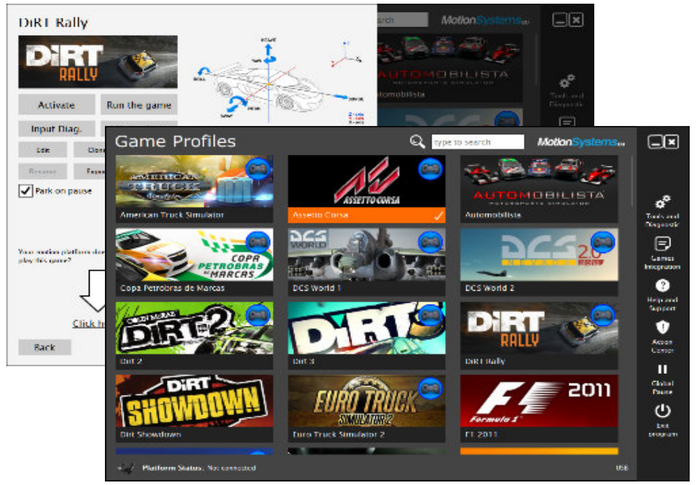
ForceSeatPM

Even most advanced hardware is nothing without good software.

ForceSeatPM – our software which is used by the most demanding customers. What is most impressive, is that it is definitely intuitive, powerful and light application to manage your motion platform. Developed with attention to every detail. Platform manager software gives user possibilities of motion adjustment, motion post-processing, extensive diagnostic or easy and fast use of predefined profile, just a click away. After installing ForceSeatPM on your PC, connect the platform via USB (or Ethernet) and you are ready to go.

ForceSeatPM (platform manager) is professional and specialized software for the platform and is click and play compatible with all major racing and flight titles on PC and constantly updated to support new titles as they are released. The Platform Manager is a powerful engine, yet it's simple to use meaning you can adjust levels of motion, bumps, roll and pitch with a click of a button.

Software also includes VR HeadWay technology, which is using advanced mathematics formulas to calculate necessary compensation and applies it to the VR headset in real time, it gives the most authentic and immersive simulation experience.



ForceSeatDI

ForceSeatDI (Direct Interface) is lower level interface than ForceSeatMI.
It controls hardware directly and ForceSeatPM is not required at all.

This interface allows to control more than one motion platform from the same PC and allows to create complex but fully synchronized movements of multiple motion platforms. It supports Windows PC, Linux and Raspberry Pi 3.

Introduction

- Recommended for applications that require complex but fully synchronized movements of multiple motion platforms
- Motion cueing implemented in SIM
- No need for ForceSeatPM or other external processes

Features

- Supports fast top frame positioning and precise top frame positioning
- Supports Inverse Kinematics
- Better control of the hardware
- Support multiple platforms over USB and over Ethernet
- Different positioning request can be send to each motion platform
- Constant simulation frame rate in SIM is recommended (30 ~ 50 FPS)
- Feedback about current position is being refreshed up to 100 times/sec
- Compatible with Unreal Engine and Unity, C/C++, C#

ForceSeatMI

ForceSeatMI (Motion Interface) is the most popular programming interface that allows to add a motion platform support to basically any application or a game.

The ForceSeatMI does not control hardware directly – it sends all data to ForceSeatPM. This approach delegates responsibility of transforming telemetry data to a real motion from the application to ForceSeatPM. It means that application developers do not have to worry about things like platform disconnections, transmission errors, thermal protection warnings or signal filtering.

Introduction

- Recommended for vehicle physics simulation
- Hardware independent - different script for different motion platforms
- Telemetry to motion transformation is done outside of the SIM
- All diagnostic and processing features of ForceSeatPM are available

Features:

- Supports forces simulation (telemetry), fast top frame positioning and precise top frame positioning
- Supports Inverse Kinematics
- Supports multiple platforms in clone mode over USB
- Telemetry data to motors position transformation done by ForceSeatPM scripting engine
- Motion cueing can be changed at runtime without recompilation
- Constant simulation frame rate in SIM is recommended (30 ~ 50 FPS)
- Feedback about current motors position is available at 20ms intervals
- Compatible with Unreal Engine and Unity, C/C++, C#

OUR SOFTWARE IS INTEGRATED WITH:

UNREAL ENGINE unity

ForceSeatDI & ForceSeatMI

ForceSeatMI		**TELEMETRY DATA**
	DESCRIPTION	SIM provides g-forces and accelerations and ForceSeatPM transforms from forces to top frame movements
	APPLICATION	Vehicle physics simulations
	FEATURES	Motion cuening can be changed at run time without source code recompilation. It is easy to introduce support for different motion platforms by just changing a motion profile
ForceSeatMI ForceSeatDI		**FAST TABLE POSITION**
	DESCRIPTION	SIM sends top frame position in abstract units
	APPLICATION	Positioning applications
	FEATURES	Motion platform will always move (to the closest possible position) even when transformation is out side working range
ForceSeatMI ForceSeatDI		**PRECISE TABLE POSITION**
	DESCRIPTION	SIM sends top frame position in real world units (Inverse Kinematics)
	APPLICATION	Equipment testing
	FEATURES	Working in real world units. SIM has to make sure that requested transformation is within working range, otherwise top frame will not move

	ForceSeatMI	**ForceSeatDI**
C/C++/C#/UNITY	✓	✓
LINUX	×	✓
MULTIPLE PLATFORMS FROM ONE PC	USB (mirror)	USB, Ethernet
ERROR HANDLING & DIAGNOSTIC	By ForceSeatPM	By the SIM
REQUIRES ForceSeatPM	✓	×
TELEMETRY MODE&SCRIPTING	✓	×
FAST AND PRECISE POSITIONING	✓	✓
PROFILE SELECTION BY THE USER	✓	×
INVERSE KINEMATICS	✓	✓

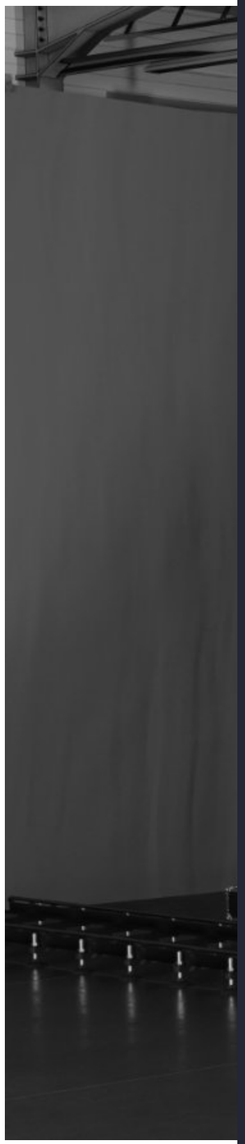
MOTION THEATER

Motion Theater is a software that moves you into another world. The world of motion magic that you have never experienced before. Stand next to your favourite main character, take part in the breakneck escape, jump from the roof or fly the jet. From now you can get involved!

You can build your unique motion paths in two different ways. First option is to specify length of your motion path. Second one is to load a video that you like – in such case motion path will be fitted to selected media. The concept is similar to audio recording, but instead of audio tracks, there are motion tracks. You can record up to 6 independent motion tracks and up to 4 special effects tracks. To record motion path you can use any PC joystick or game controller.

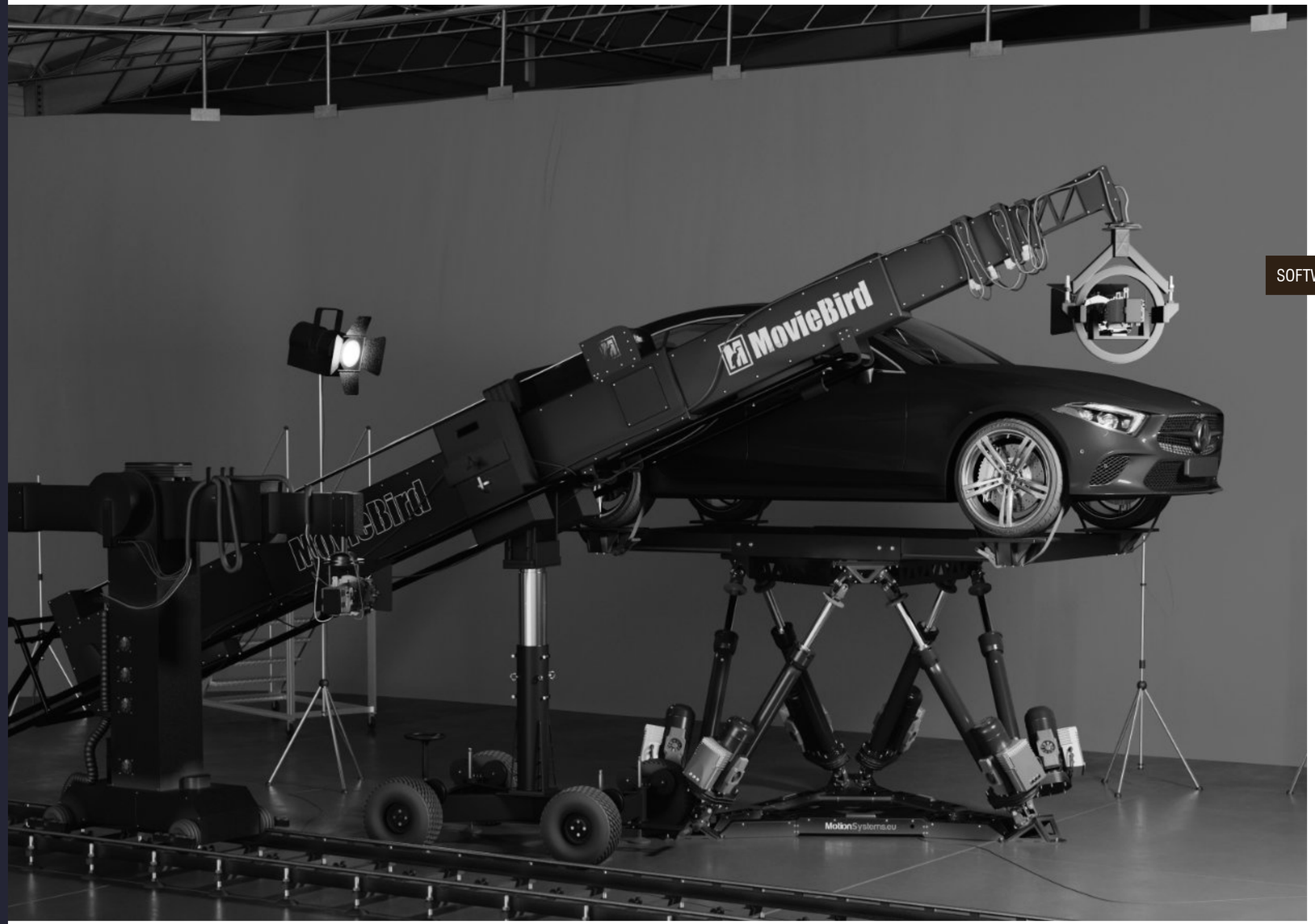
Features

- Dynamic motion simulation for SFX effects
- Support up to 6 independent motion tracks and up to 4 special effects tracks
- Software integrated with motion recorder and player
- Motion record using PC joystick or game controller
- Compatible with all Motion Systems platforms
- Motion and video synchronization tool
- Integrated with VideoLAN VLC



Using Motion Theater in combination with most powerful Motion System PS-6TL-1500 you can achieve the highest precision, repeatability and smoothness of the movement for each motion picture production needed.

Motion platform used for Special Effects Production ensures the highest safety, cost reduction and possibility of long and complicated film shots.



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