




Corporate presentation

 info@hikari-engineering.eu

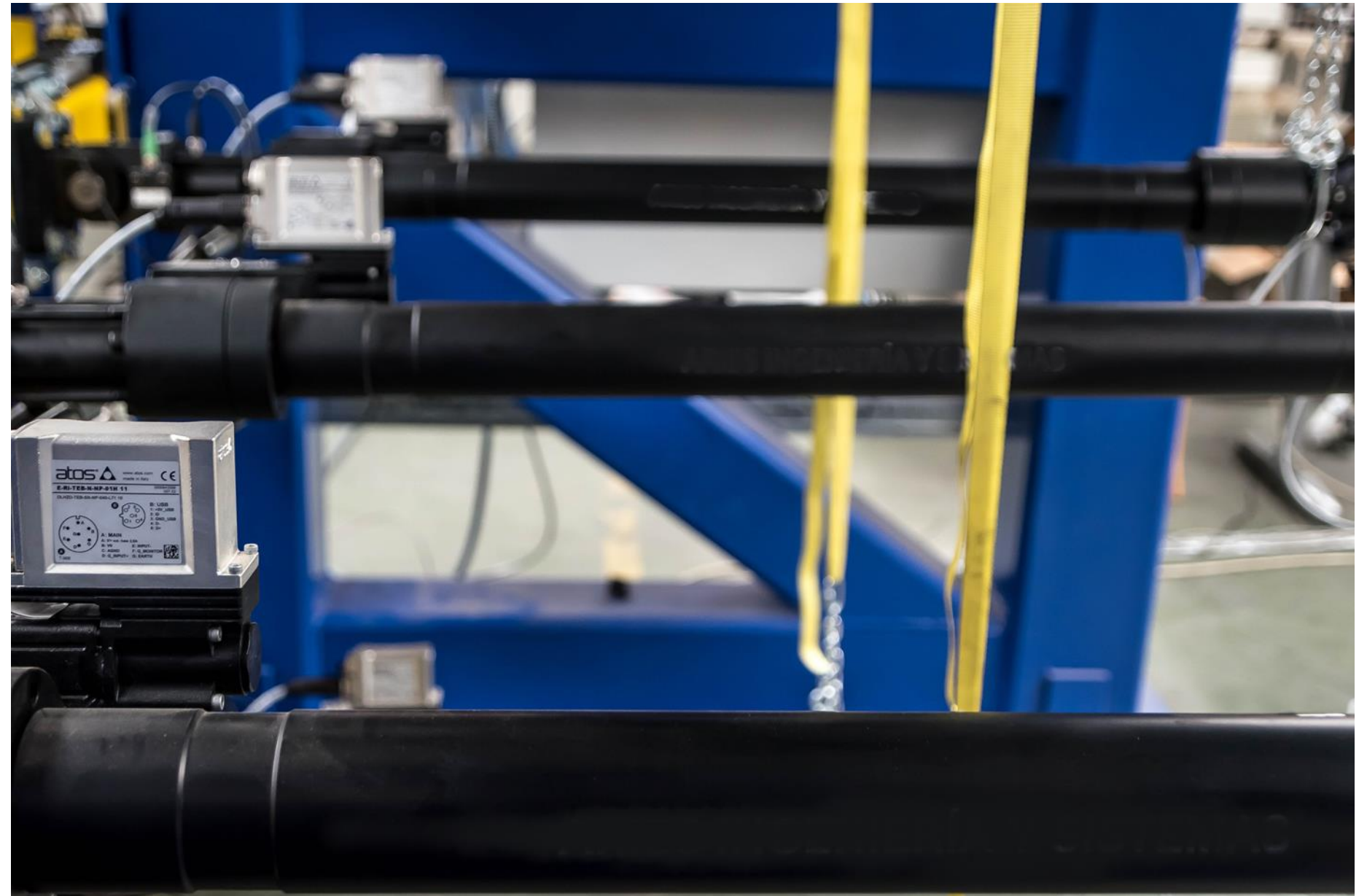
 (+34) 666 153 913

 C/ Alfonso XII, 46 3 DR
28014 Madrid, Spain



Content

1. Who we are
2. Products and services
3. Business areas
 - Automotive
 - Railway
 - Testing systems
4. Custom-made projects
5. References

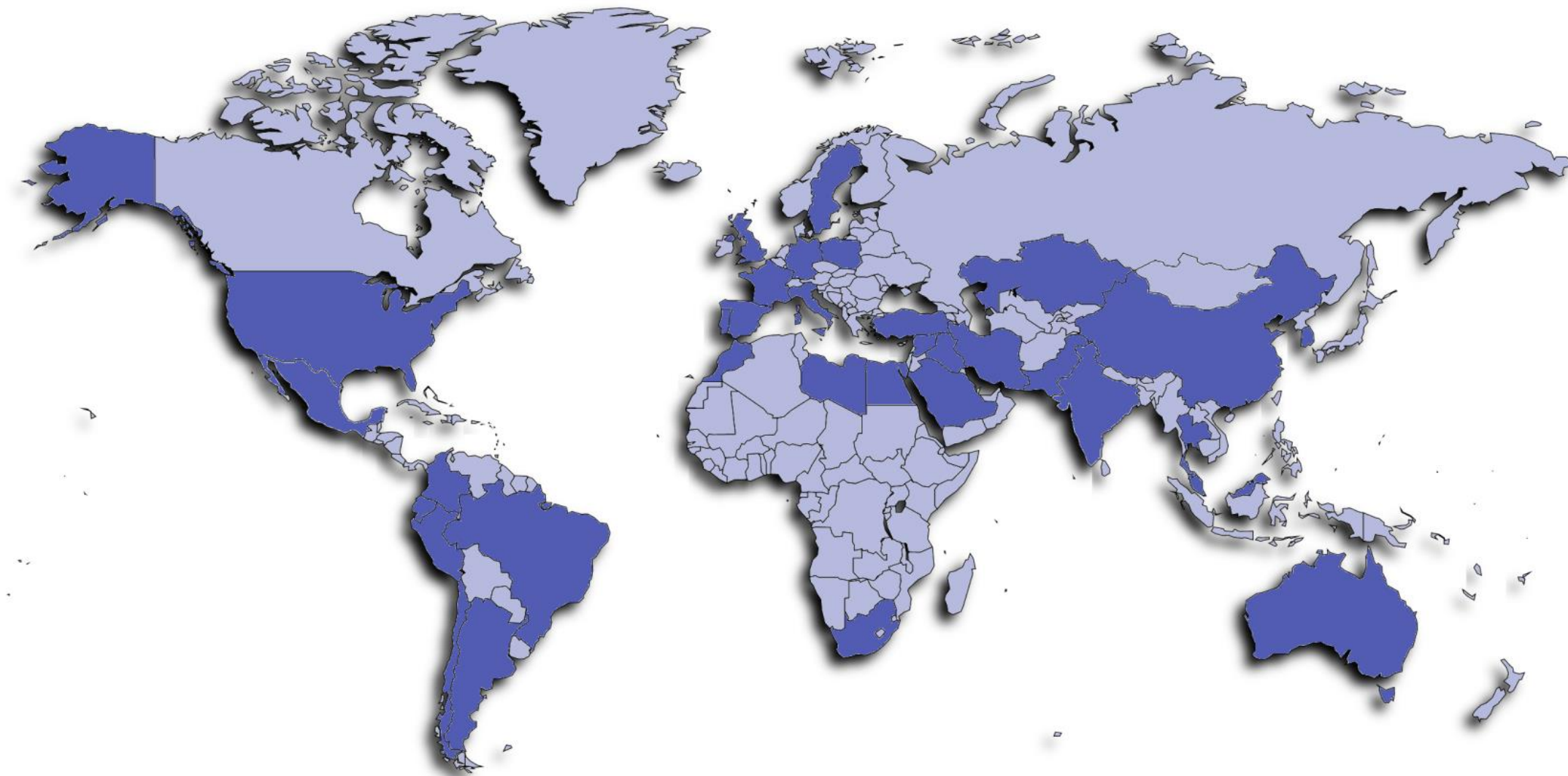


Who we are

Company general information

HIKARI is a global engineering company based in Madrid, Spain.

Present in around 30 countries and with a team that has designed, delivered and maintained more than 1.000 systems.



■ HIKARI references

Products and services

Scope of supply and core divisions

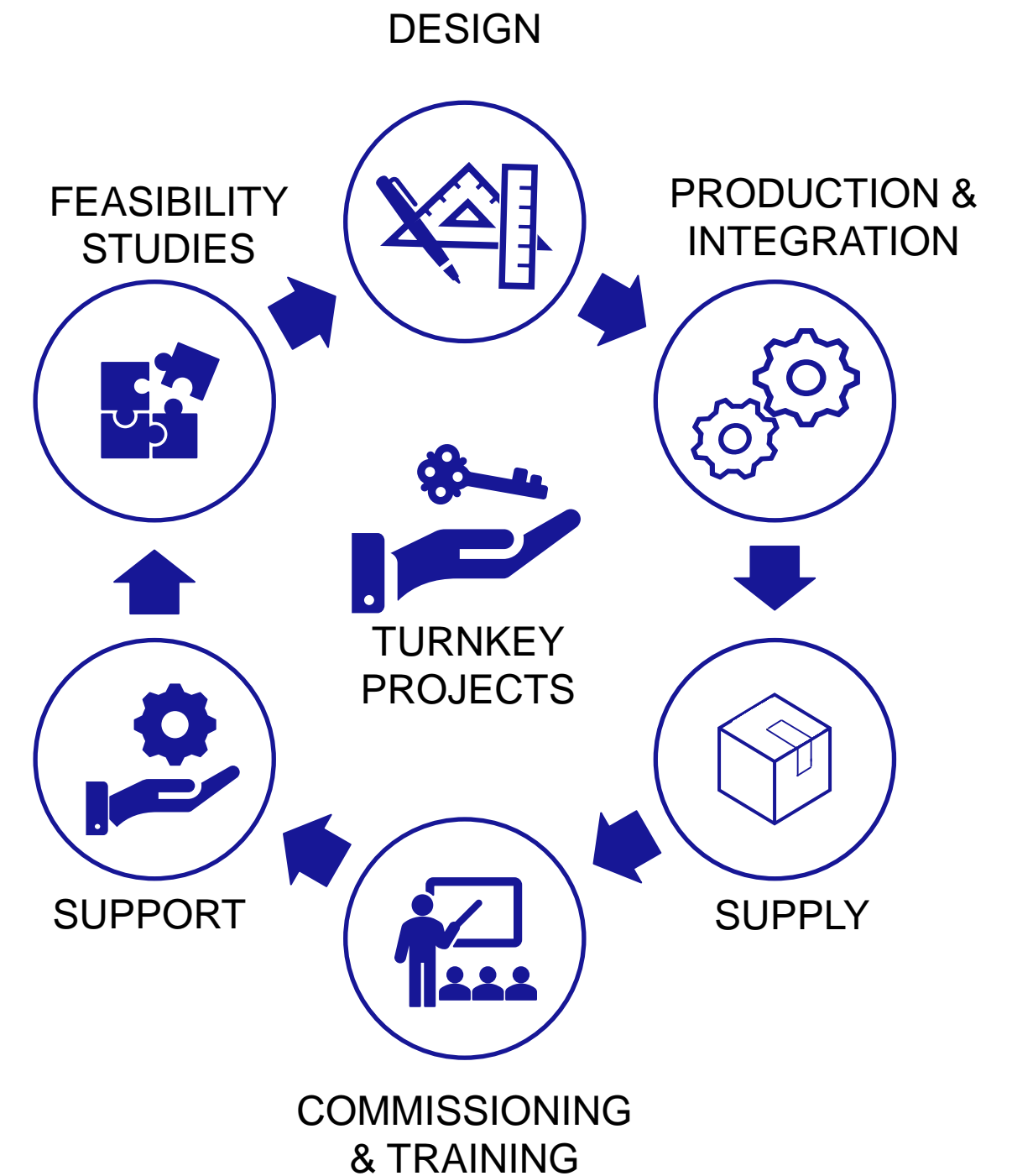
Tailor-made solutions:

- Engineering studies and specialized consultancy.
- Design and full equipment for test laboratory.
- Project definition and complete system supply.
- Installation, setup and continuous training.
- After-sales service and integral maintenance.

Core divisions:

Automotive, railway and testing systems
(climatic, vibration and batteries).

Singular projects also in the aerospace, defence, structural,
industrial applications and R&D sectors.



Automotive

Passive safety

Full scale crash test facilities:

Designed and developed by HIKARI, our facilities integrate cutting-edge technology and are suitable for all sorts of tests according to the latest industry standards:

- Frontal impact
- Side impact
- Rear impact
- Car-to-car
- Low speed
- Rollover
- Integrated sled



Automotive

Passive safety

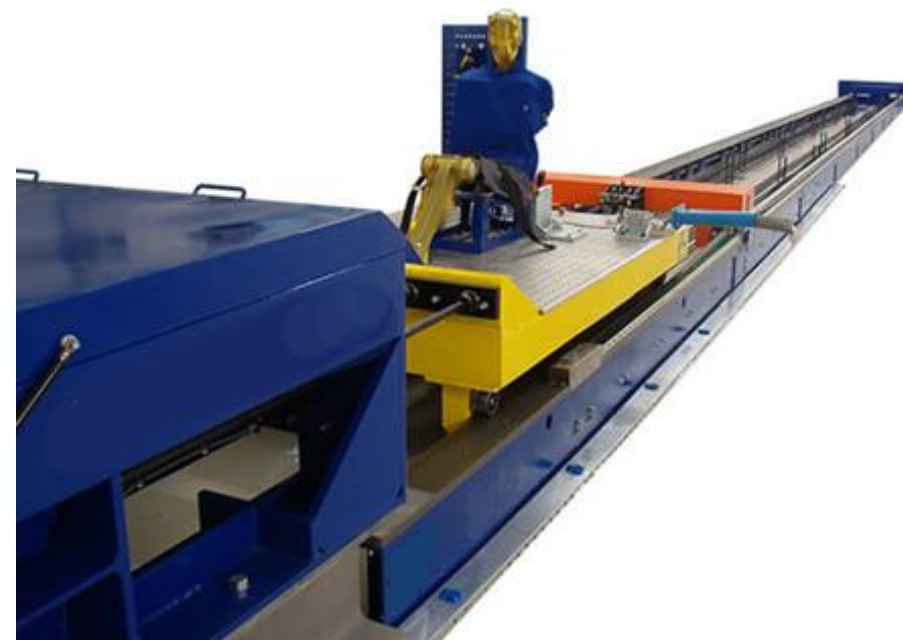
Launcher family:

- Pedestrian safety, airbags, steering columns, seating components, dashboards, bumpers...
- Performed under international norms and standard tests.
- High speed and position accuracy.
- Modular & flexible, easy setup.
- User friendly customizable software.



Sled crash simulation system

- Regulation compliance and R&D testing: ECE R16, R17, R44, R80, R129, FMVSS, GB, EuroNCAP...
- Heavy-duty system.
- Precise and repeatable test results.
- User friendly control software.
- Easy installation and commissioning.
- Fully customizable.



Seat Belt Anchorage test system

- Testing according to regulatory standards and R&D.
- Electric or hydraulic powered.
- Servo-control ensures precision and repeatability.
- Multiple options: Integrated bed plate, lightweight fibre chains and loading elements and accessories.



Railway

Main products

Synchronized train lifting and bogie dismounting system

- For all types of trains
- Modular and customizable setup.
- Flexible (bogie selection one by one).
- Fully electric: low maintenance system requirements and clean areas.
- No civil works required.
- High load capacity, precision and fully configurable control.



Railway infrastructure test system

- Simulated section of track and geotechnical box.
- Dynamic hydraulic actuators.
- Tailor-made and adjustable frames (in longitudinal position).
- Simulation of train passages at low, medium and high speeds.
- 100% configurable.



Car frame crushing system

- Compliant with EN-12663 standard.
- For all types of train body shells.
- Adaptable to body shells dimensions.
- High precision hydraulic actuators with load and position sensors.
- Hydraulic power plants.
- Digital controller for test preparation, execution and analysis.



Testing systems

Main products

Thermal test systems:

- For all types of environmental tests.
- Reproducing temperature, humidity and special conditions.
- Validation of newly designed products, cycling of mechanical and/or electrical components.
- R&D&I or certification.
- Standard or tailor-made chambers.
- Combinable with vibration systems.



Vibration test systems:

- Wide range of products.
- Vertical or installed on monobase.
- Vibration controllers allowing MIMO and MISO closed-loop testing.
- Configurable number of channels.
- Hydraulic and electrodynamic systems according to test requirements and applicable norm.
- Combinable with climatic chambers.



Battery testing systems

- For cells, batteries and modules.
- All types of tests according to standards and norms: UL, SAE, ISO, UN, UNECE, JIS.
- Thermal and environmental, mechanical, electrical, fire and tests under special conditions and particular requirements.
- Customized solutions on demand.
- Configurable and with real time control and data acquisition.



Custom-made projects

Introduction

Our extensive experience and team of specialists allows HIKARI to offer all kinds of customized solutions complying with the highest quality standards in various fields of engineering, industries and R&D:

- Engineering and feasibility studies.
- Specialized consultancy.
- R+D+I and certification proposals.
- Design of facilities and laboratories.
- Full turnkey projects.
- Supply of singular systems and equipment.



Custom-made projects

Automotive, Railway, R&D

Complete test bench for trailers and semi-trailers

- Designed for all types of trailers.
- Actuator system for multi-axial static and dynamic tests.
- Structural, fatigue and performance testing.
- Flexible and customized configuration.
- Control system with profile generator and complete data logging.



Catenary test bench

- For rigid and flexible catenary.
- Capacity up to 300 Nm.
- Modular and configurable design.
- High upgrade potential in capacity and functionality.
- MIMO/MISO control systems.
- Open/closed loop.
- High precision control.



Test loop for medium temperature concentrating solar collectors

- Tested according to ISO 9806/2017.
- Wide operating range.
- Highest accuracy and repeatability.
- Thermal performance tests on collectors up to approximately 25 m² aperture area.
- User-friendly controller and software with data logging capability.



Custom-made projects

Aerospace and defense

Advanced low pressure pneumatic launcher for UAVs

- Advanced technology launcher designed specifically for launching UAVs/UATs.
- Pressure lower than 10 bar.
- Maximum safety.
- High and easy to use system.
- Quick start-up and assembly.



UAV engine test bench

- For testing and characterization of a wide range of UAV engines.
- Flexible and modular system.
- Installation for outdoor use.
- ROTAX 914 (four cylinders, four stroke, turbo).
- Thrust 120 N.
- Torque 120 Nm.



Critical underwater vibration simulator

- Simulation of explosions and underwater waves.
- Certification of explosion-proof. Accelerations and decelerations controlled by hydropneumatic system.
- Sample size: up to 2m x 2m.
- Maximum sample weight: 1500 kg
- Maximum acceleration: 400 g



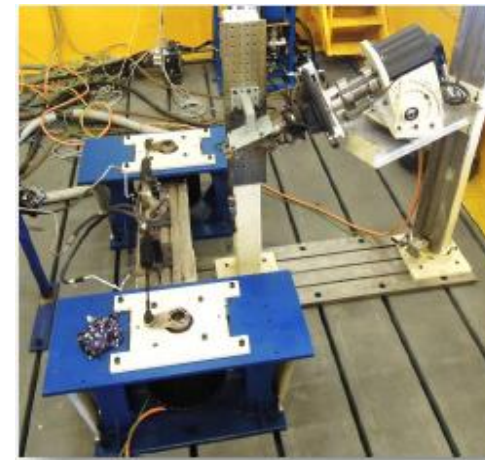
Custom-made projects

All kinds of industries and applications

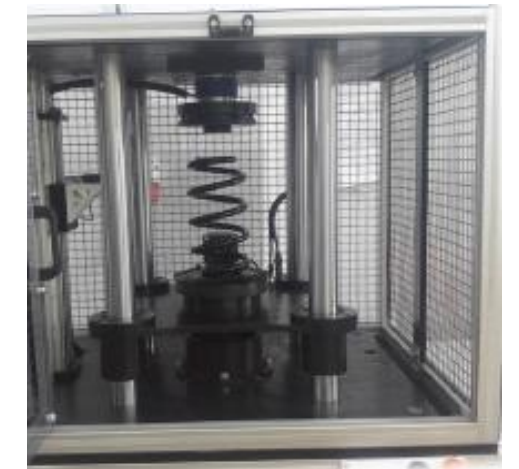
Electric vehicle motor performance test bench



Vehicle steering test system



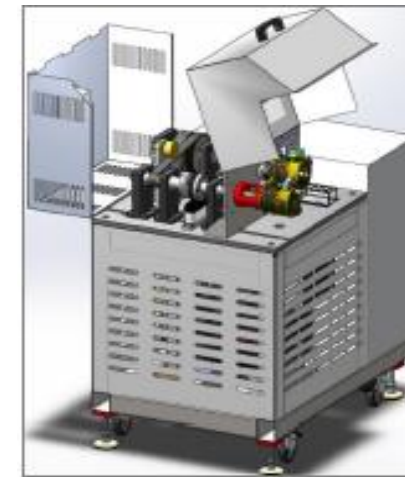
Coil spring performance test bench



Oil pump and fuel system simulator



Alternator test rig



Bearing test system



References

Some of our clients



Thank you!



HIKARI Engineering S.L.

✉ info@hikari-engineering.eu

☎ (+34) 666 153 913

📍 C/ Alfonso XII, 46 3 DR
28014 Madrid, Spain