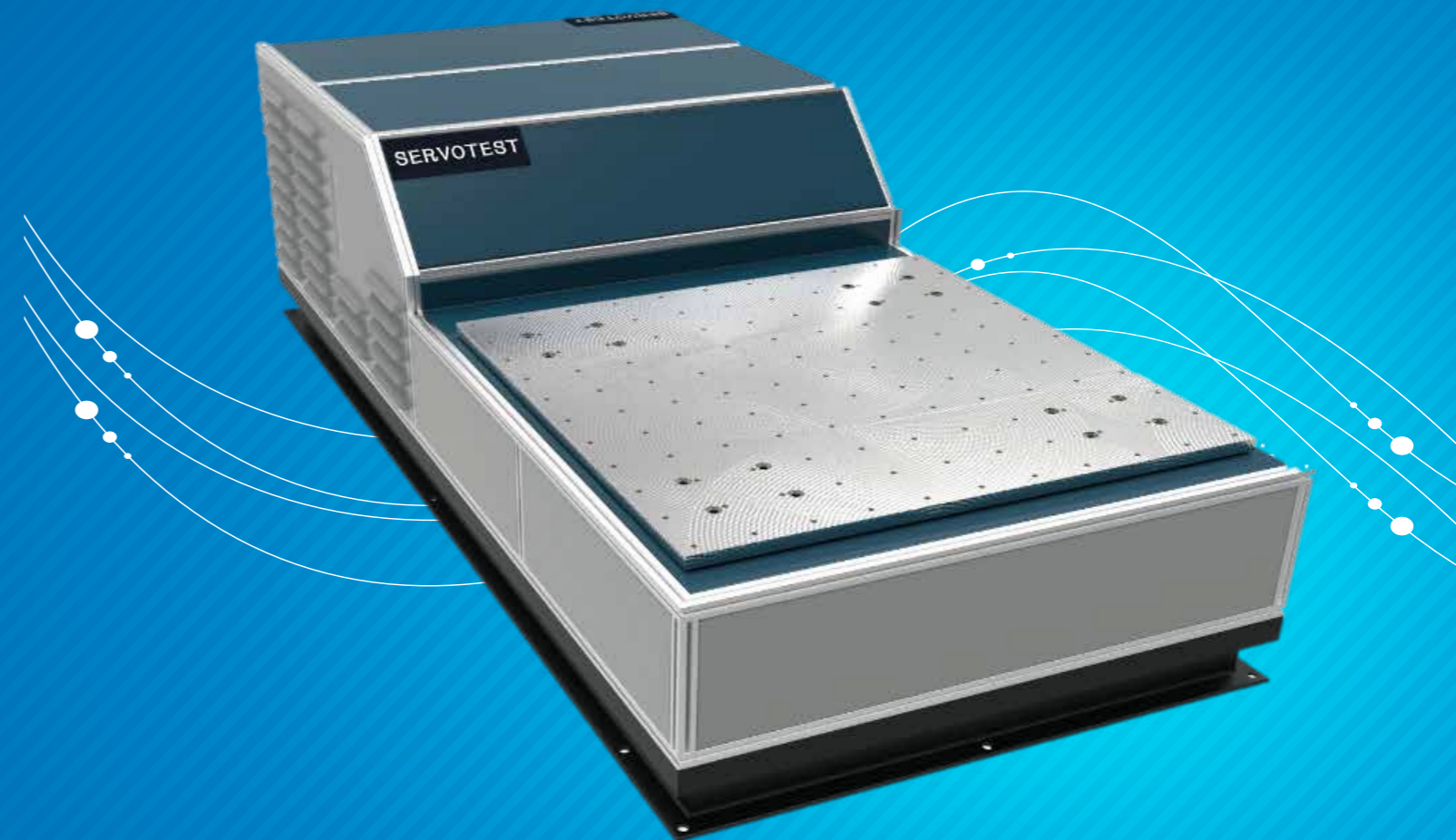


SERVOTEST
TEST AND MOTION SIMULATION

Single-Axis Shake Table



SERVOTEST
TEST AND MOTION SIMULATION

SERVOHYDRAULIC TEST AND MOTION SIMULATION SYSTEMS

Website: www.servotestsystems.com www.bbkco.com.cn

Email: sales@servotestsystems.com sales@bbkco.com.cn

Tel: +44 (0) 1784 274410 +86 (10) 6057 1288

Fax: +44 (0) 1784 274438 +86 (10) 6057 1010

Servotest Testing Systems Ltd

SERVOTEST

TEST AND MOTION SIMULATION

The Servotest Single-Axis Shake Table (SAST) is a horizontal uniaxial shake table intended as an entry-level seismic simulation system. This is a standard product that is equally suited to teaching and fundamental research work within universities and research institutions.

Configured to deliver up to 2 g acceleration with a nominal 500 kg payload mounted on a 1 m square horizontal table, the system also provides a high level of over-turning moment constraint as required for typical seismic simulation payloads. The system can also be used for more general purpose vibration test work at test frequencies between 0.1 & 100 Hz.

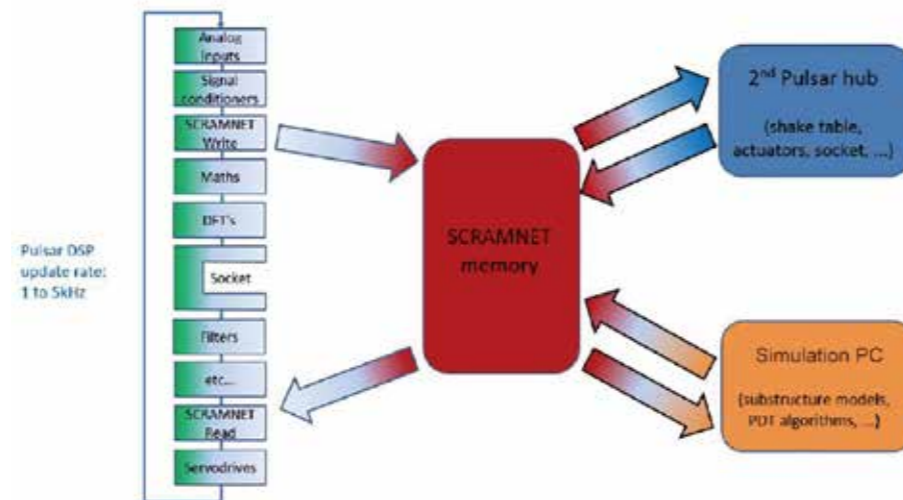
The SAST offers a compact fully-integrated design with hydraulic power, actuation and test table all enclosed within a single unit. This configuration also reduces the installation task to bolting down to a suitable seismic foundation and connection of electrical power.

System control is delivered by the proven Servotest Pulsar digital servo-control platform. Using the same hardware and software as on our large-scale 6-dof seismic Multi-Axis Shake Table (MAST) systems provides access to both fundamental and advanced control capabilities. Utilising built-in displacement and acceleration sensors, combined with customer-supplied specimen transducers and iterative control strategies enables the system to deliver uniaxial high-fidelity reproduction of displacement, velocity and acceleration responses typical of real-world seismic events.

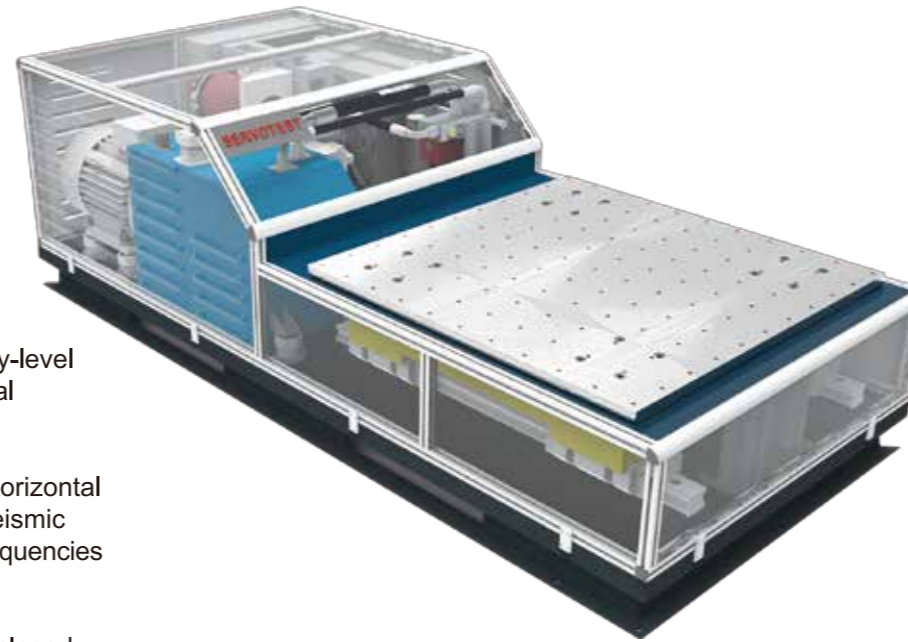
Not limited to basic control, the Pulsar controller can easily be extended to support open control system architectures based upon optional SCRAMNet® reflective memory hardware and associated software interfaces. This supports advanced research applications such as substructure testing and hybrid simulation using customer-developed data interfaces and structural simulation models.

Such applications can be explored by combining the SAST with additional actuators mounted to a reaction wall. This represents an ideal configuration both for teaching and research thereby promoting laboratory capabilities within this booming field of civil-structural research. System users can quickly establish a hybrid loading system, perform in-depth algorithm development and run prototype verification tests.

Servotest customer support does not stop with delivery and installation. Our worldwide systems engineering and service teams can provide on-going support to ensure that our customers get the most out of their test system investment. Customer-specific product and application training programs are also available to ensure your staff has the knowledge and skills to get your new equipment up and running quickly and to keep it that way.



Using SCRAMNET to interface in real time with the outside world



Key features of the system include:

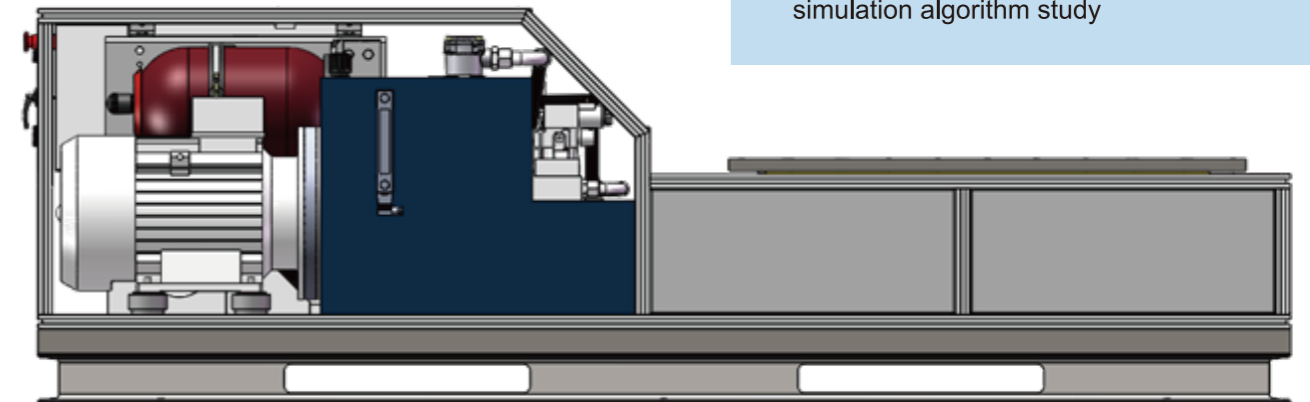
- A proven high-performance low-friction fatigue-rated hydrostatic bearing actuator driven by a low-noise hydraulic power supply
- Built-in cooling & filtration features to maintain the hydraulic oil in optimum condition, ensuring long-term system performance
- A bolt-hole pattern across the full working area of the specimen table supporting easy attachment of a broad range of specimens

Key characteristics of standard single-axis shake table

- Compact fully-integrated design to minimize infrastructure requirements and installation time
- Advanced open-ended digital control based on the proven Servotest Pulsar system
- A powerful but cost-effective testing platform

Applicable to

- Academic, industrial & collaborative teaching
- Fundamental research
- Seismic simulation and seismic qualification
- Contract structural test
- General vibration test, including transport simulation
- Extendable to in-depth substructure testing and hybrid simulation algorithm study



Performance Parameter*

Table size	1 m x 1 m
Rated specimen mass	500 kg
Max working stroke	100 mm (+/-50 mm)
Max acceleration	2 g
Max velocity	0.9 m/s
Max overturning moment	10 kN.m
Test frequency range	0.1 – 100 Hz

*The performance specified is based on the rated specimen mass