

BiSS Uniaxial Shaketables are ideal for performing seismic simulation, solid liquefaction and vibration tests on models as well as for engineering qualification of components and assemblies for earthquake and vibration resistance. The table is designed with a natural frequency to exceed 100 Hz and the design also ensures that the c g of the test object can lie anywhere within the table and elevated upto 1000 mm above the table. The precision machined rails engage with the linear bearings and provide the linear horizontal movement. The system is powered by an electronically servo controlled low noise, variable flow, variable pressure, energy efficient pump and a digital control and data acquisition system with options to connect a wide variety of transducers. BiSS systems are configured to specific client requirements, using many standard and available high quality industrial grade components.

Applications

- For conducting structural and component qualification test in laboratories.
- Accelerated reliability test.
- Soil liquefaction tests.
- Earthquake motion simulation.
- Seismic qualification tests.
- Response of reinforced soil slopes.
- Response of reinforced soil retaining wall.
- Response of wrap-faced reinforced soil retaining wall.



Standard features

- Payload capacity 500 to 10000 kg.
- Table stroke up to 1500 mm.
- Table size 0.5 x 0.5m, 1 x 1m, 1.5 x 1.5m, 2 x 2m and 3 x 3m.
- Low friction and wear resistance linear motion bearings.
- Fatigue rated actuators.
- Threaded mounting holes on the table top for specimen mounting.
- Encoder based displacement measurements.
- Energy efficient pumps.
- Servo controlled displacement test.
- Adaptable to wide range of test.
- Zero backlash and quiet performance.
- Operating frequency up to 70Hz.
- Peak velocity up to 2m/s and acceleration up to 10g.
- State of art 3648 MIPS DSP, 2746M FLOPS DSP 24-bit analog data conversion, 32-bit data acquisition and 40 bit servo-loop calculations.
- Data acquisition rates up to 40kHz.
- User friendly application software.

Specifications

Model Number	SH-01-0505	SH-01-1005	SH-01-1010	SH-01-1510	SH-01-1520	SH-01-2020	SH-01-2030	SH-01-3050	SH-01-3010
Table Size (m)	0.5 x 0.5	1.0 x 1.0		1.5 x 1.5		2.0 x 2.0		3.0 x 3.0	
Payload (kg)	500		1000		2000		3000	5000	10000
Displacement (mm)	up to 500 (+/-250)			Up to 1500 (+/-750)					
Displacement Resolution (mm)	0.001			0.01					
Acceleration Range (g)	0.005 to 10			0.005 to 5			0.005 to 2		
Frequency Range (Hz)	0.1 to 70			0.1 to 50			0.1 to 30		
CG above Table (mm)	1000						2000		
Sustain Velocity (m/s)	0.6						0.3		
Peak Velocity (m/s)	2.0						0.6		