

BiSS Bi-Axial Shake tables are ideal to perform seismic simulation, soil 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 center of gravity of the test object can lie anywhere within the table and elevated up to 1000 mm above the table. The precision machined rails engage with the linear bearings and provide the linear horizontal movement in X and Y directions. 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.



## Standard features

- Table size 0.5 x 0.5m, 1 x 1m, 1.5 x 1.5m, 2 x 2m and 3 x 3m
- Payload capacity 500 to 10000kg
- Tables are designed for high stiffness and high natural frequency
- Table stroke up to 1500mm on both X and Y axes
- X and Y direction movements with servo hydraulic actuators
- Low friction and wear resistance preloaded linear motion bearings
- Threaded mounting holes on the table top for specimen mounting
- Digital displacement measurement on both axes with 1micron resolution
- Zero backlash and quiet operation
- Operating frequency up to 60Hz
- Perfect harmonic and random acceleration time-histories
- Peak velocity up to 2m/s and acceleration up to 10g
- User friendly biaxial Shake table application software
- Full digital control with Digital Signal Processor based servo controller
- center of gravity of the test object can lie anywhere within the table and elevated up to 1000 mm above the table
- 11LPM to 250LPM flow rate power packs for high frequency applications
- Harmonic, Sine Sweep, Sine on Sine, Random and Real earthquake.

## Applications

- For conducting structural and component qualification test in labs.
- Accelerated reliability test.
- Harmonic and random acceleration time-histories
- 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.



## Specifications

Model Number	SH-01-0505B	SH-01-1005B	SH-01-1010B	SH-01-1510B	SH-01-1520B	SH-01-2020B	SH-01-2030B	SH-01-3050B	SH-01-3010B
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 3		
Frequency Range (Hz)	0.1 to 100			0.1 to 80			0.1 to 60		
CG above Table (mm)	1000						2000		
Sustain Velocity (m/s)	Up to 2						Up to 1.2		
Peak Velocity (m/s)	Up to 3						Up to 2		

