



Patent Pending

TESTBOX SHAKETABLE SERVO ELECTRO-MECHANICAL SHAKE TABLE (EARTHQUAKE SIMULATOR)

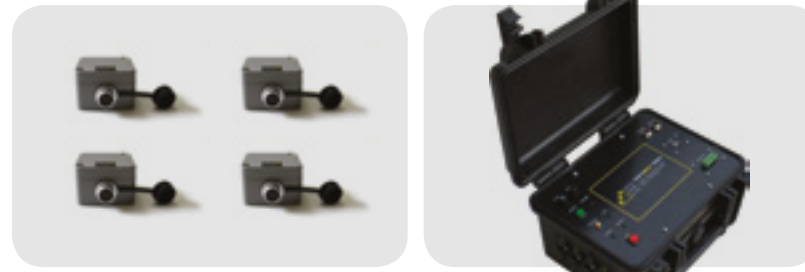
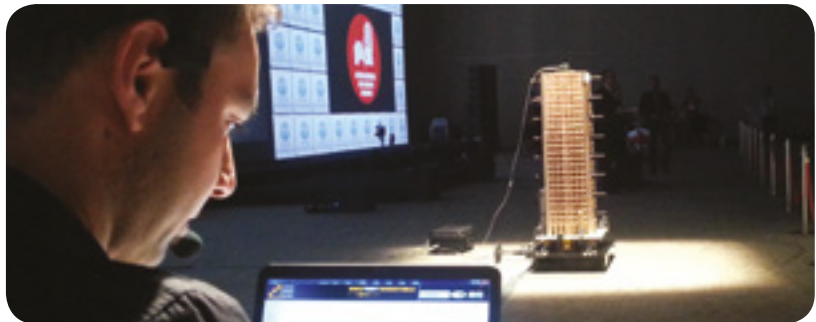
This product can simulate the previously recorded earthquakes, and can also apply defined waveforms such as sinus, triangle, etc. or user defined customized acceleration or position profiles , as well.

This simulator has a servo-motor and a PID controller which can easily be controlled by a computer software. It is mainly used for training purposes at Civil/Structural Engineering undergraduate/graduate education.

This product can also be used for performing small scale structural mechanics, earthquake, soil and geological engineering tests, or for calibration of accelerometers and vibration sensors.

In the contest which is being organized by DASK(Turkish Catastrophe Insurance Pool), annually in TURKEY, multiple TESTBOX-SHAKETABLEs are used as the simulators, combined with complementary measurement systems and software.

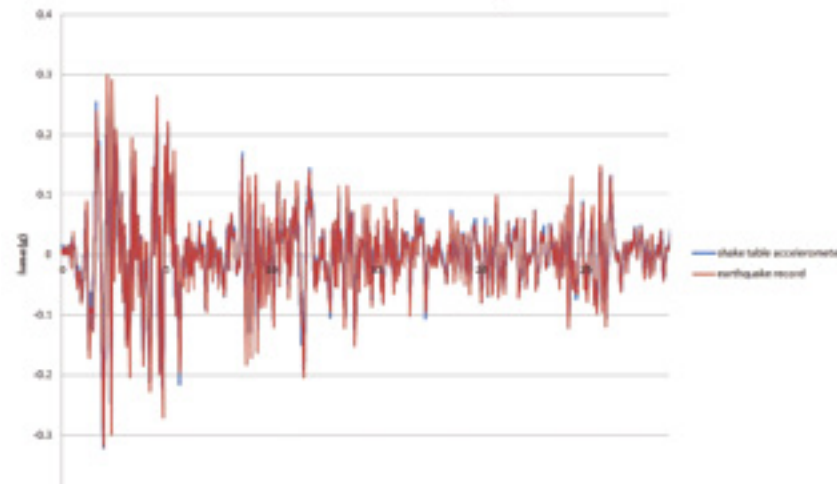
This product is being used widely all over the world such as United States, India, Thailand, Spain, Indonesia in addition to the universities and research institutes in Turkey.



COMPLEMENTARY MEASUREMENT SYSTEM

The earthquake simulator is generally used together with a complementary measurement set in order to measure reactions over the model and make acceleration and displacement calculations.

1xTESTBOX2010-4,4xSENSEBOX7001 accelerometer /displacement gauge)



High Coherence- Comparison of the applied and measured acceleration data during an earthquake simulation test

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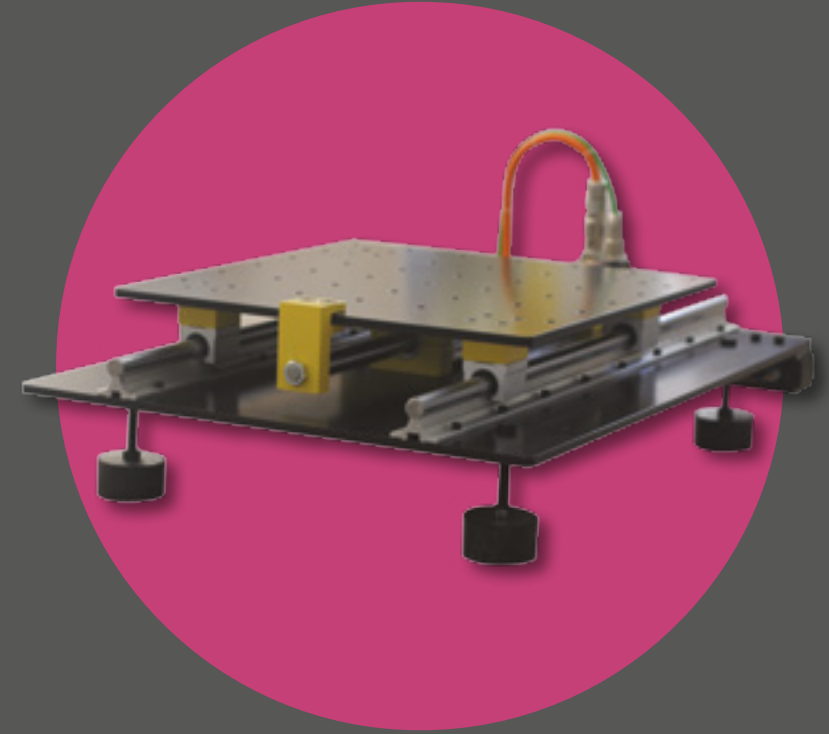
TESTBOX SHAKETABLE

CAPACITY/ TABLE SIZE/ STROKE

This practical product can be manufactured at different table dimensions, displacement and payload capacities optionally.

Dynamic actuator capacity options are 1/2.5/5/10 kN. Flexible sizing and dynamic capacities make these simulators suitable for industrial product and material user-defined vibration tests and small- to medium scale model tests in earthquake and soil engineering. Higher capacities are possible with customized design opportunities.

| TECHNICAL SPECIFICATIONS | |
|----------------------------------|---|
| | TESTBOX SHAKETABLE |
| Top Table Dimensions | 50x50x1 cm |
| General Dimensions | 80x60x20 cm |
| Capacity | ± 1g @ 100 kg ± 2g @ 50 kg |
| Weight (approximate) | 45 kg |
| Stroke | 200 mm |
| Maximum Power (Theoretical) | 1000 N |
| Maximum Linear Speed | 500 mm/sn |
| Frequency Band | ±80mm - 1Hz ±2mm - 10Hz ±0.4 mm - 20 Hz |
| Control Sensitivity | 16 bit, analog output |
| Control Type | Closed Circuit PID Control With Special Motion Control Algorithms |
| Feedback | Qaudrature Encoder |
| Encoder Sensitivity | 411 counts/mm |
| | PC SOFTWARE |
| Simulation Possibilities | Step, Cyclic Defined Waveforms and Earthquake Records |
| Cyclic Defined Waveforms | Sinus, Triangle, Saw Tooth and Square Wave |
| Earthquake File Format | ASCII (TXT tab-separated) |
| Earthquake/ Profile Point Number | Unlimited |
| Graphics and Indicators | Position - Time and FFT Graphics |



Earthquake
Simulation

Totally
Computer
Software
Controlled

Sinus, Triangle,
Square etc.
Defined
Waveforms

Application
of Recorded
Earthquake
Accelerations

High Industrial
Quality,
Maintenance Free
Design

High Control
Sensitivity With
Encoder Feedback
Servomotor

Undergraduate/
Graduate
Education(Modal
Analysis)

Earthquake / Civil
Geophysics/ Soil
Medium to Small-
scale Tests

Accelerometer
Calibration

Building Design
Contests and
Model Testing

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