# SHAKE TABLE III XY

Heavy-load dual-axis motion simulator

The Quanser Shake Table III XY is an open architecture, dual-axis motion simulator ideal for more advanced structural dynamics analysis and research related to earthquake loss reduction. This high-power system is capable of moving heavy payloads at high accelerations and velocities. The Shake Table III XY can be programmed through a standalone Shake Table software or, for advanced control applications and scaling and playback of earthquake data, through QUARC software for Simulink. Linear motors actuation eliminates the need for hydraulics and ensures safe, reliable and quiet operation with low maintenance requirements.

Features
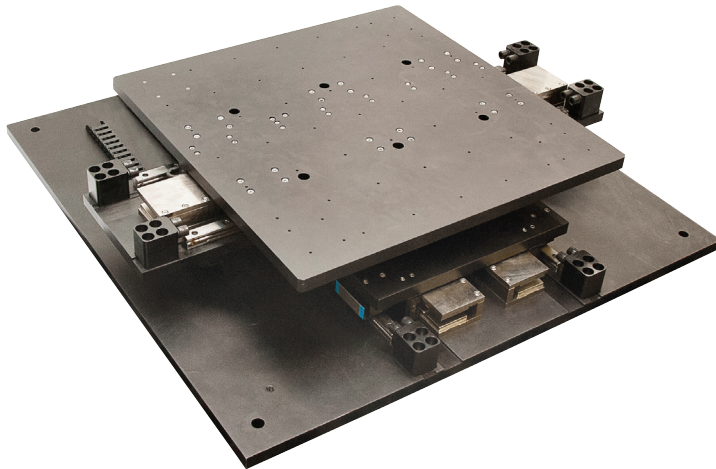
High Capacity

Capable of moving heavy payloads at high acceleration and velocities

Simple Operation

Safe, reliable, clean operation and low maintenance

Customizable

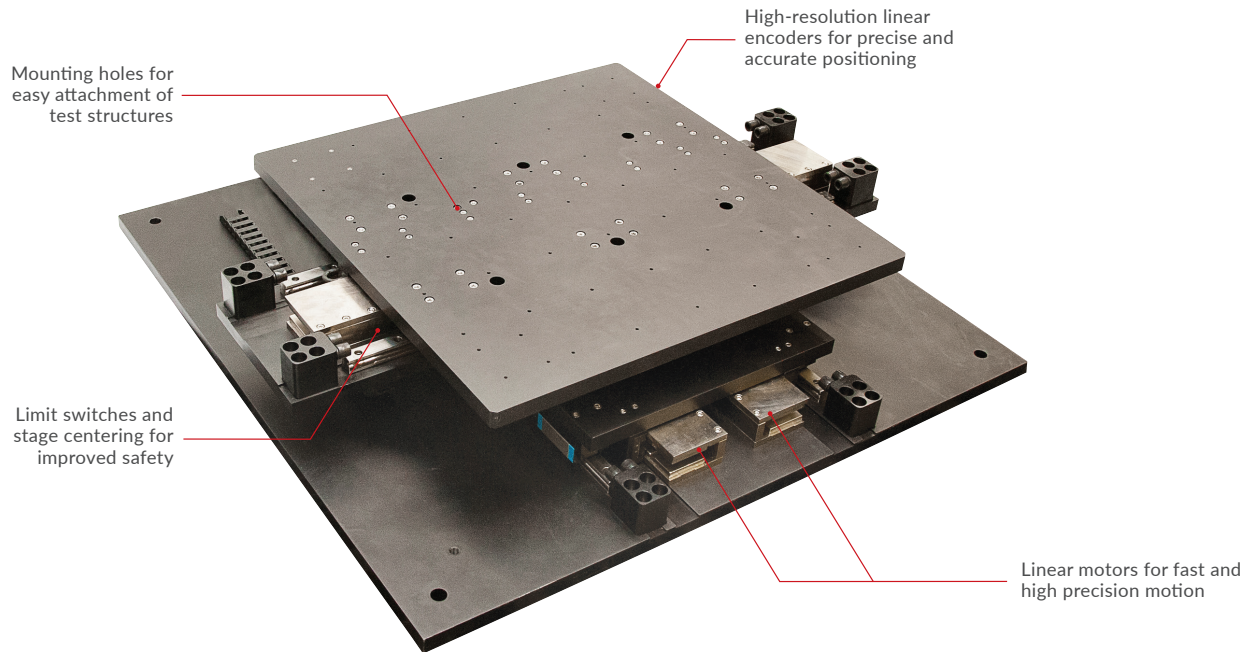Easy integration of sensors, actuators, user-built or Quanser test structures

Turn-key

All hardware components, software and fully documented system models and parameters included

Workstation Components

Motion simulator	Shake Table III XY
Data acquisition devices	Quanser Q8 PCI
Power system	230 VAC Integrated Power System
Control design environment	Standalone Shake Table III software QUARC Software for Simulink - Integration license
Computer	Rack-mount Shake Table III-ready PC
Test structure (optional)	One- or two- floor Active Mass Damper with VoltPAQ-X1 or VoltPAQ-X2 amplifier

Product Details

High-resolution linear encoders for precise and accurate positioning

Mounting holes for easy attachment of test structures

Limit switches and stage centering for improved safety

Linear motors for fast and high precision motion

Device Specifications

Dimensions (L x W x H)	106.7 cm x 106.4 cm x 20.3 cm
Total mass	550 kg
Payload area (L x W)	71.1 cm x 71.1 cm
Maximum travel	± 10.8 cm (x), ± 10.8 cm (y)
Maximum payload at 1 g[1]	100 kg
Maximum acceleration with 100 kg payload[1]	1.0 g (x), 1.0 g (y)
Maximum velocity with 100 kg payload[1]	1.55 m/s (x), 1.29 m/s (y)
Maximum force with 100 kg payload[1]	2626 N (x), 2189 N (y)
Operational bandwidth[1]	10 Hz
Effective stage position resolution	1 µm

[1] Please contact Quanser for full operational bandwidth specifications

About Quanser:

For 30 years, Quanser has been the world leader in education and research for real-time control design and implementation. We specialize in outfitting engineering control laboratories to help universities captivate the brightest minds, motivate them to success and produce graduates with industry-relevant skills. Universities worldwide implement Quanser's open architecture control solutions, industry-relevant curriculum and cutting-edge work stations to teach Introductory, Intermediate or Advanced controls to students in Electrical, Mechanical, Mechatronics, Robotics, Aerospace, Civil, and various other engineering disciplines.