

SHAKE TABLE I-40

Compact single-axis motion simulator

The Quanser Shake Table I-40 is an open architecture, low-maintenance, compact single-axis motion simulator ideal for teaching structural dynamics and control, earthquake engineering and other topics related to civil and geotechnical engineering. Shake Table I-40 can be easily operated through a simple standalone software. Pre-loaded acceleration profiles of real earthquakes, such as Northridge and El Centro, allow students to study the effects of ground motion on buildings, bridges and various materials. For more advanced control design applications, the Shake Table I-40 can be operated using Simulink® and the Quanser QUARC software.

Features



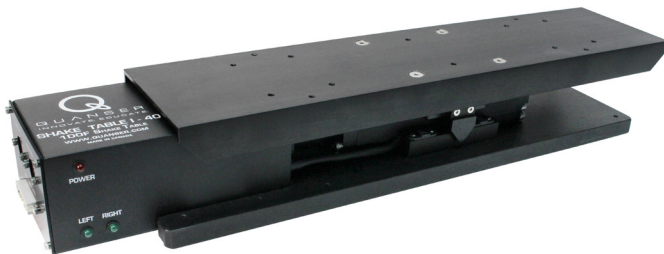
All-in-One

Turnkey system with software for structural response monitoring and analysis



Compact

Portable, easy-connect setup for a quick and effortless interface with a computer



Customizable

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



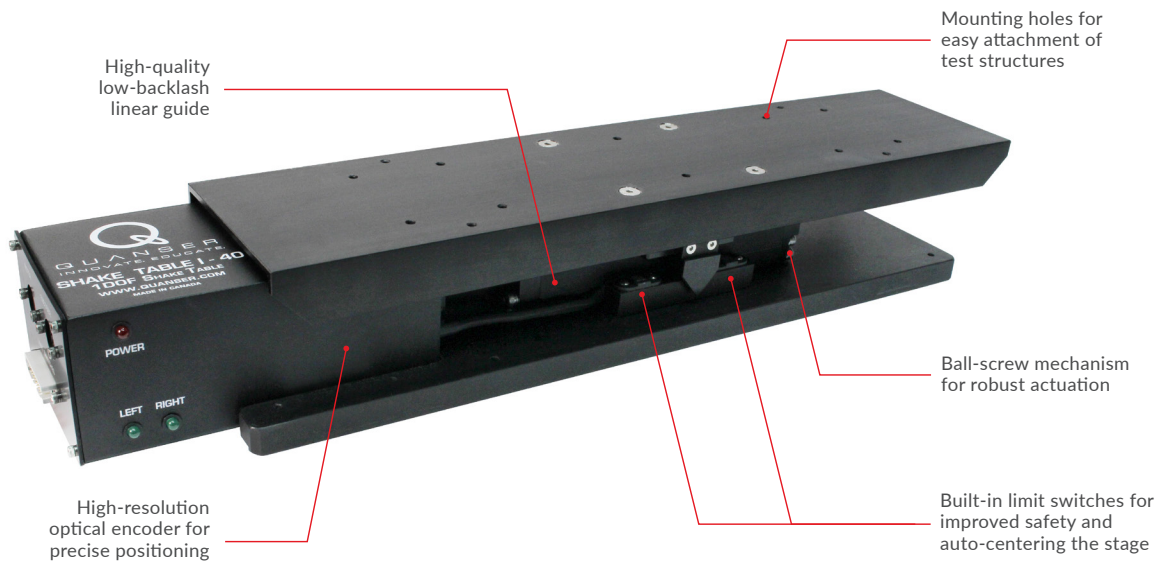
Accurate

Precise positioning using a high-resolution encoder and low-backlash guide

Workstation Components

Motion simulator	Shake Table I-40
Data acquisition devices	Quanser Q2-USB
Amplifier	Quanser VoltPAQ-X1 linear voltage amplifier
Control design environment	Standalone Shake Table I-40 software QUARC Software for Simulink - Integration license
Test structure (optional)	One-floor Active Mass Damper with VoltPAQ-X1 amplifier

Product Details



Device Specifications

Dimensions (L x W x H)	57.5 cm x 12.7 cm x 7.62 cm
Total mass	5.88 kg
Payload area (L x W)	43.2 cm x 10.2 cm
Maximum travel	± 2 cm
Maximum payload at 1.0 g ¹	1.5 kg
Maximum acceleration with 1.5 kg payload ¹	1.0 g
Maximum velocity with 1.5 kg payload ¹	0.417 m/s
Operational bandwidth ¹	10 Hz
Lead screw encoder resolution (quadrature)	8192 counts/rev
Effective stage position resolution	1.22 μm
Accelerometer range	±49 m/s ²
Accelerometer sensitivity	1.0 g/V

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.

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