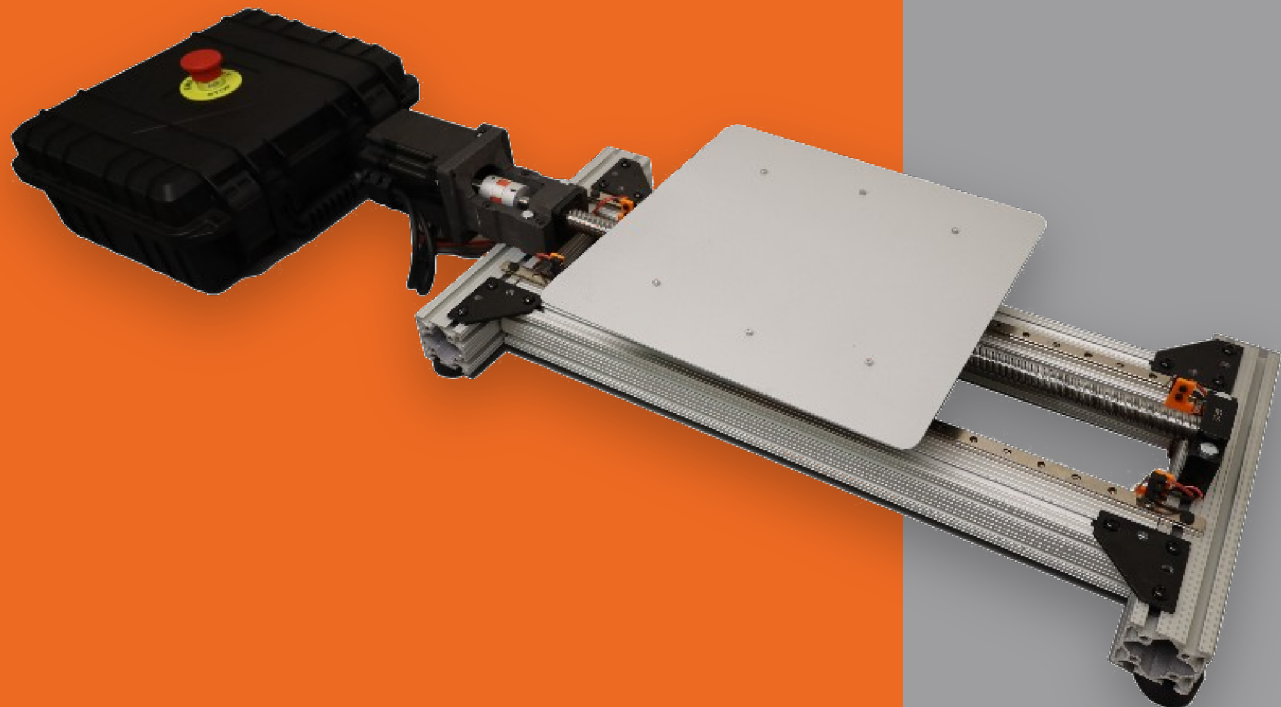


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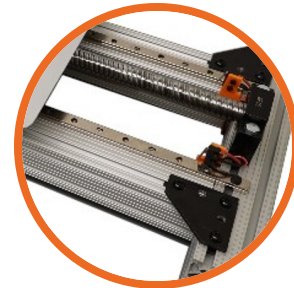
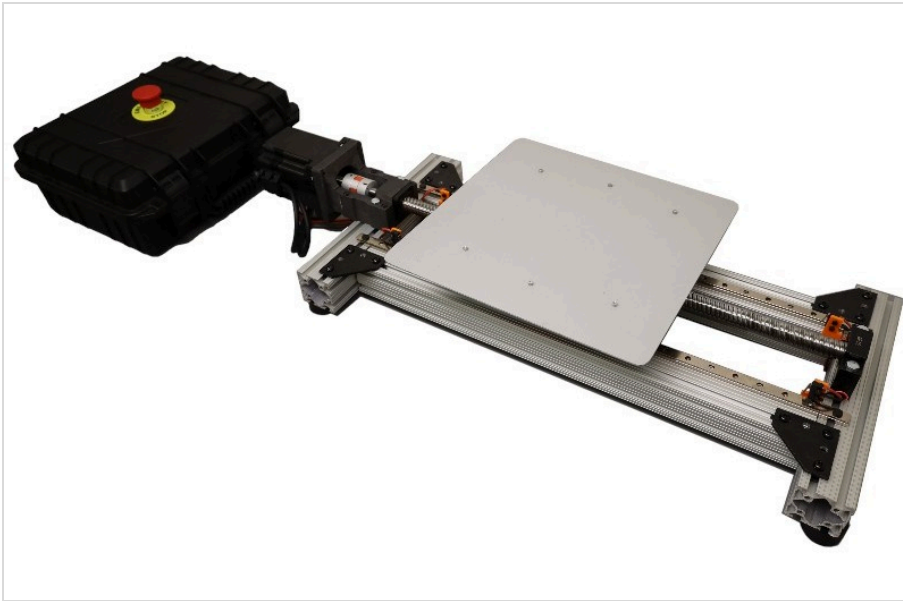
PORTABLE
SINGLE-AXIS
SHAKE TABLE



SHAKEBOT-100

SHAKEBOT-100

PORTABLE SINGLE-AXIS SHAKE TABLE · 220 LB (100 KG) AT 1 G



TWICE THE PAYLOAD IN THE SAME PORTABLE FORMAT

ShakeBot-100 is the high-capacity member of the ShakeBot family: a benchtop, single-axis servo-electric shake table with a 19.7 × 19.7 in (500 × 500 mm) top plate that drives a 220 lb (100 kg) payload at 1 g, or 110 lb (50 kg) at 2 g, at velocities up to 31.5 in/s (800 mm/s) and frequencies up to 25 Hz. Larger servo motors and a wider deck carry heavier structural, geotechnical and component models, while the open Python/ROS control software, safety system and portable form factor stay identical to ShakeBot-40.

- Doubles the ShakeBot-40 payload rating so taller frames, soil boxes and equipment specimens can be tested at full 1 g demand.
- Replays recorded earthquake motions up to 150 s, standard cosine waveforms, or your own CSV displacement histories with closed-loop feedback.
- Open architecture: graphical client plus Python on the Robot Operating System (ROS), on Windows, macOS and Ubuntu, with no license fees.
- Software displacement limits, range limit sensors, torque-limited shutoff and an emergency stop protect specimens and operators.



Made in USA

Designed and built by QuakeLogic in Roseville, California, with domestic and globally sourced materials.

STANDARD FEATURES »

- 19.7 × 19.7 in (500 × 500 mm) top plate
- 220 lb (100 kg) payload at 1 g
- 110 lb (50 kg) payload at 2 g
- 31.5 in/s (800 mm/s) peak velocity
- ±4.33 in (±110 mm) stroke
- Operation up to 25 Hz
- 0.004 in (0.1 mm) position precision
- Closed-loop servo-motor drive
- Precision ball screw and linear guides
- 150 s ground-motion replay
- CSV custom waveform import
- GUI + Python/ROS software
- Windows, macOS, Ubuntu
- Emergency stop and limit sensors
- 110 VAC or 220 VAC input
- Separate control box with E-stop

KEY FEATURES

- High-capacity servo-motor drive rated for 220 lb (100 kg) at 1 g and 110 lb (50 kg) at 2 g, with larger motors than ShakeBot-40 sized for the heavier deck and specimens.
- 19.7 × 19.7 in (500 × 500 mm) machined top plate with a bolt-hole grid for structure models, soil boxes, fixtures and equipment specimens.
- Peak velocity of 31.5 in/s (800 mm/s) and ±4.33 in (±110 mm) of stroke reproduce long-period ground motions as well as high-frequency sine and sweep tests up to 25 hertz.
- Closed-loop feedback control with 0.004 in (0.1 mm) position precision delivers repeatable motion run after run, so results can be compared across specimens and semesters.
- Replays earthquake records up to 150 s long, built-in cosine displacement functions, and custom displacement histories imported from CSV files.
- Graphical client software plus Python supported by the Robot Operating System (ROS) runs on Windows, macOS and Ubuntu; users can write their own controller code.
- Layered safety: software-defined displacement limits, range limit sensors, torque-limited shutoff and a hard-wired emergency stop on the control box.
- Portable two-piece system: the table and its separate control box move between classrooms, laboratories and outreach events without rigging.
- Made in USA with domestic and globally sourced materials, and supported by QuakeLogic application review, training and documentation.

PRODUCT FEATURES

Motion

Single horizontal axis (1 DOF); ±4.33 in (±110 mm) stroke, 8.66 in (220 mm) total travel.

Payload & Acceleration

220 lb (100 kg) at 1 g; 110 lb (50 kg) at 2 g. Acceleration depends on payload and frequency.

Velocity & Frequency

Up to 31.5 in/s (800 mm/s); operating frequency up to 25 Hz.

Drive & Control

Closed-loop servo motor on a precision ball screw with linear guides; 0.004 in (0.1 mm) position precision.

Top Plate

19.7 × 19.7 in (500 × 500 mm) with tapped bolt-hole grid; four table mounting brackets included.

Software

GUI client and Python/ROS tools for Windows, macOS and Ubuntu; predefined and custom waveforms; free updates, no license.

Safety

Software displacement limits, range limit sensors, torque-limited shutoff, emergency stop switch.

Power & Environment

110 VAC or 220 VAC (default 110 VAC); operating 32–104 °F (0–40 °C); humidity to 80 % non-condensing.

For more information about the features, specifications, and available configurations of the ShakeBot-100, please contact QuakeLogic.

SYSTEM CONFIGURATION

COMPONENT	CONFIGURATION
Table Type	Benchtop single-axis (horizontal) servo-electric shake table
Top Plate	19.7 × 19.7 in (500 × 500 mm) machined plate with bolt-hole grid
Drive	Closed-loop servo motor, precision ball screw, linear guides
Control Box	Separate enclosure with servo drive, power inlet and emergency stop
Control Interface	USB to host computer; Ethernet cable supplied
Software	Graphical client + Python/ROS; Windows, macOS, Ubuntu
Waveforms	Earthquake records (up to 150 s), cosine functions, CSV import
Safety	Software limits, range limit sensors, torque-limited shutoff, E-stop
Power Input	110 VAC or 220 VAC, factory set (default 110 VAC)
Included	Table, control box, 4 mounting brackets, USB, Ethernet and IEC power cables

PERFORMANCE ENVELOPE

SPECIFICATION	VALUE
Payload at 1 g	220 lb (100 kg)
Payload at 2 g	110 lb (50 kg)
Maximum Velocity	31.5 in/s (800 mm/s)
Stroke	±4.33 in (±110 mm); 8.66 in (220 mm) total
Operating Frequency	Up to 25 Hz
Position Precision	0.004 in (0.1 mm)
Record Length	Ground motions up to 150 s
Operating Temperature	32–104 °F (0–40 °C)

OPTIONAL FEATURES & ACCESSORIES

TRANSPORT CASE & CART Protective transport case and wheeled cart or heavy-duty steel pedestal for moving, storing and bench-mounting the table.	GEOBOX GEOTECHNICAL FIXTURE Laminar soil container for liquefaction, lateral spreading, slope and soil-structure interaction demonstrations on the table.
QUAKETOWER STRUCTURE MODELS Modular plexiglass multi-story frames and other structure models for mode-shape, damping and active-control experiments.	SENSORS, DAQ & TRAINING Accelerometers, displacement sensors and data-acquisition packages, plus on-site or remote training and curriculum support.

TECHNICAL SPECIFICATIONS

SPECIFICATION	DESCRIPTION
Model	ShakeBot-100 Portable Shake Table
Degrees of Freedom	1 (single horizontal axis)
Top Plate	19.7 × 19.7 in (500 × 500 mm)
Payload at 1 g	220 lb (100 kg)
Payload at 2 g	110 lb (50 kg)
Maximum Velocity	31.5 in/s (800 mm/s)
Maximum Displacement	±4.33 in (±110 mm), 8.66 in (220 mm) total stroke
Maximum Operating Frequency	25 Hz
Position Precision	0.004 in (0.1 mm)
Drive	Closed-loop servo motor, ball screw, linear guides
Control	Feedback (PID) control with real-time motion feedback
Record Length	Ground motions up to 150 s
Waveforms	Predefined cosine functions; custom CSV displacement histories

SPECIFICATION	DESCRIPTION
Software	Graphical client; Python supported by ROS; open architecture for custom controllers
Operating Systems	Windows, macOS, Ubuntu
Control Interface	USB to host computer; Ethernet cable supplied
Safety Features	Software displacement limits, range limit sensors, torque-limited shutoff, emergency stop
Power Input	110 VAC or 220 VAC; default 110 VAC (factory configured)
Operating Temperature	32–104 °F (0–40 °C)
Storage Temperature	32–140 °F (0–60 °C)
Humidity	Up to 80%, non-condensing
Table Mounting	Four mounting brackets included; 1/4"-20 T-slot frame for custom mounting
System Components	Shake table, control box, USB cable, Ethernet cable, IEC power cable
Origin	Made in USA with domestic and globally sourced materials
Warranty	One year against manufacturing defects
Intended Use	Education and research; operate within published limits by trained personnel

Performance depends on payload mass, center of gravity, fixture stiffness and waveform. Confirm the test configuration with QuakeLogic before purchase. Specifications are subject to change without notice.

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**About QuakeLogic:**

QuakeLogic Inc. is a California-based engineering and technology company providing innovative, reliable, high-quality solutions to customers worldwide.

Our Commitment

We are committed to quality, innovation, and customer satisfaction – building lasting partnerships through reliable solutions and dependable support.

Scan to View Product:

SHAKEBOT-100

