

QUAKELOGIC

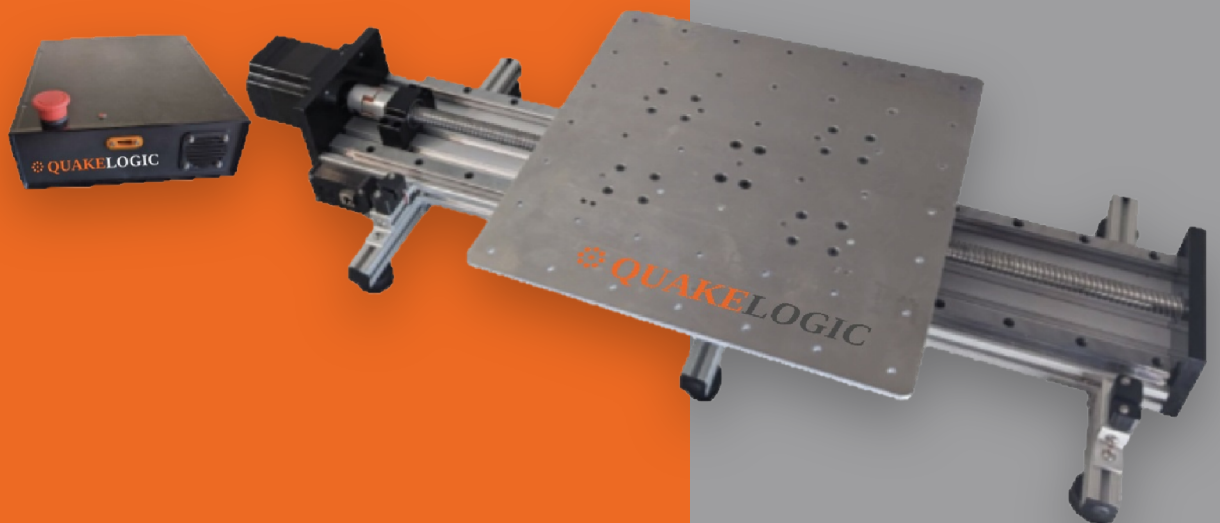
PORTABLE
VERTICAL-AXIS
SHAKE TABLE



WITH GLOBALLY SUPPLIED MATERIALS

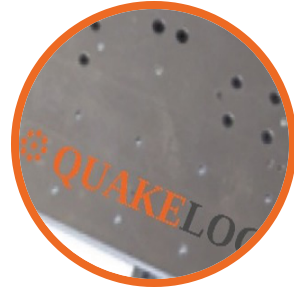
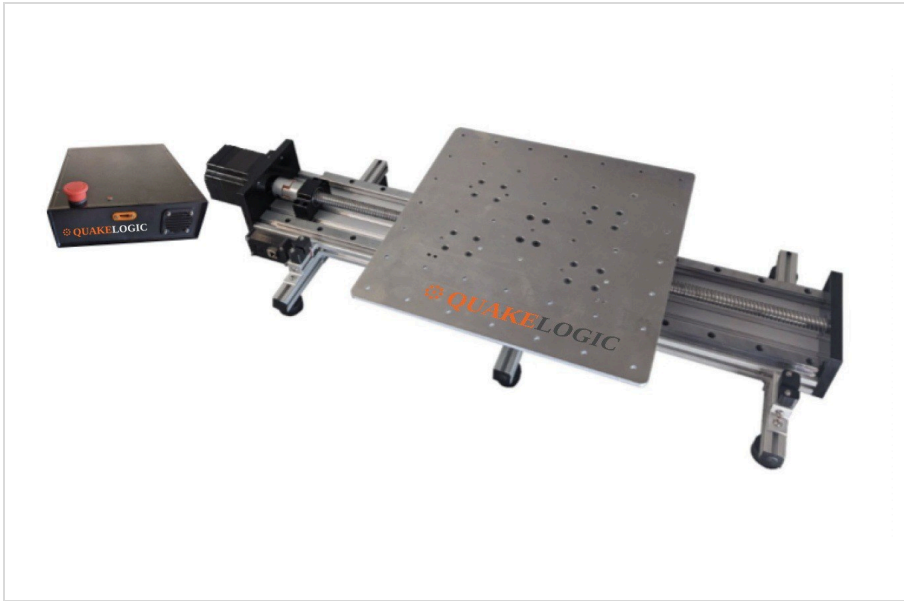


SHAKEBOT-40Z



SHAKEBOT-40Z

Portable Vertical-Axis (Z) Shake Table



PRECISION VERTICAL MOTION FOR RESEARCH AND TEACHING

The SHAKEBOT-40Z is a portable single-axis shake table that reproduces vertical (Z-axis) seismic and vibration motion with a servo-driven electro-mechanical actuator and closed-loop control. Built for testing broadband seismometers, sensitive instruments, and non-structural components, it delivers ± 8.7 in (± 220 mm) of stroke and a 110 lb (50 kg) payload at 1 g from a bench-portable unit weighing about 44 lb (20 kg).

- Runs cosine, random, and user-defined CSV displacement time histories up to 150 seconds with closed-loop feedback control.
- Delivers 1 g vertical acceleration at 110 lb (50 kg) payload, 165 lb (75 kg) maximum, across a 0.01-25 Hz operating range.
- Permanent-license control software for Windows, macOS, and Linux with free lifetime updates; no subscription, no recurring cost.
- Protected by software displacement limits, range-limit sensors, torque-limited shutoff, over-current protection, and a dedicated emergency stop.

STANDARD FEATURES »

- Closed-loop servo control
- Vertical Z-axis motion
- ± 8.7 in (± 220 mm) stroke
- 0.004 in (0.1 mm) resolution
- 0.01-25 Hz range
- 110 lb (50 kg) payload @ 1 g
- Cosine & custom waveforms
- CSV import/export
- Real-time D-V-A monitoring
- USB & Ethernet interfaces
- Permanent software license
- Free lifetime updates
- Emergency stop switch
- Over-travel protection
- Torque-limited shutoff
- Vertical mounting brackets
- One-year warranty

KEY FEATURES

- Servo-motor-driven electro-mechanical actuation with precision ball screw and linear guideway delivers smooth, repeatable vertical motion without hydraulics.
- Closed-loop encoder feedback holds 0.004 in (0.1 mm) position resolution across the full ± 8.7 in (± 220 mm) stroke.
- Reproduces recorded ground motions: import displacement time histories in CSV format at user-defined sampling rates, or generate cosine and random waveforms.
- Real-time monitoring of platform displacement, velocity, and acceleration during every test run.
- Control software runs on Windows, macOS, and Linux under a permanent unrestricted license with free lifetime updates and maintenance releases.
- 15.7 × 15.7 in (400 × 400 mm) platform with a 49-hole M4 fixturing grid accepts specimens, fixtures, and instruments directly.
- Layered safety: software displacement limits, range-limit sensors, torque-limited shutoff, over-current and over-travel protection, and an emergency stop.
- Bench-portable at about 44 lb (20 kg), with brackets for vertical-direction mounting and all cables included for rapid laboratory or classroom setup.

PRODUCT FEATURES

ACTUATION

Servo-motor-driven electro-mechanical drive with precision ball screw and roller linear guideway; single vertical degree of freedom.

MOTION

± 8.7 in (± 220 mm) stroke, 23.6 in/s (0.6 m/s) peak velocity, 0.01–25 Hz, motion profiles up to 150 s.

CONTROL

Closed-loop feedback with 0.004 in (0.1 mm) position resolution; predefined and custom waveform modes.

SOFTWARE

QuakeLogic control client for Windows, macOS, and Linux; permanent license, free lifetime updates, CSV waveform import/export.

CONNECTIVITY

USB and Ethernet communication interfaces to the control unit.

SAFETY

Software displacement limits, range-limit sensors, torque-limited shutoff, over-current/over-travel protection, emergency stop.

PLATFORM

15.7 × 15.7 in (400 × 400 mm) plate with 49-hole M4 grid at 2.36 in (60 mm) pitch.

POWER

110 or 220 V AC, 50/60 Hz, 600 W maximum (factory-configured for destination voltage).

For more information about the features, specifications, and available configurations of the SHAKEBOT-40Z, please contact QuakeLogic.

SYSTEM CONFIGURATION

COMPONENT	CONFIGURATION
Actuation	Servo-motor-driven electro-mechanical, single vertical (Z) axis
Drive train	Precision ball screw with roller linear guideway
Motion control	Closed-loop feedback with encoder position sensing
Platform	15.7 × 15.7 in (400 × 400 mm), M4 × 49 fixturing grid
Control unit	Integrated motor driver, controller, and power supply with cooling fan
Interfaces	USB (PC control) and Ethernet communication
Software	QuakeLogic control client: Windows / macOS / Linux, permanent license
Waveform modes	Cosine, random, and user-defined CSV displacement histories
Safety systems	Displacement & torque limits, range-limit sensors, E-stop, over-current/over-travel
Power	110 or 220 V AC, 50/60 Hz, 600 W max
Included accessories	Brackets (4) for vertical-direction mounting; USB, Ethernet, and IEC power cables
Warranty	One (1)-year limited international warranty

MOTION & CAPACITY

SPECIFICATION	VALUE
Payload @ 1g	110 lb (50 kg)
Maximum payload	165 lb (75 kg)
Stroke	±8.7 in (±220 mm)
Peak velocity	23.6 in/s (0.6 m/s)
Frequency range	0.01 – 25 Hz
Position resolution	0.004 in (0.1 mm)
Motion duration	Continuous profiles up to 150 s
Table dimensions	38.6 × 15.7 × 5.9 in (98 × 40 × 15 cm)
System weight	~44 lb (20 kg)

OPTIONAL FEATURES & ACCESSORIES

TRANSPORT CASE

Rugged storage and transport case protects the table and control unit between laboratories and field demonstrations.

QL-TERRA DATALOGGER

3-, 6-, 9-, or 12-channel datalogger for recording specimen response alongside commanded table motion.

QL-MINI TRIAXIAL ACCELEROMETER

Triaxial accelerometer with embedded digitizer; USB plug-and-play, includes free QL-VISIO software.

EXTENDED WARRANTY

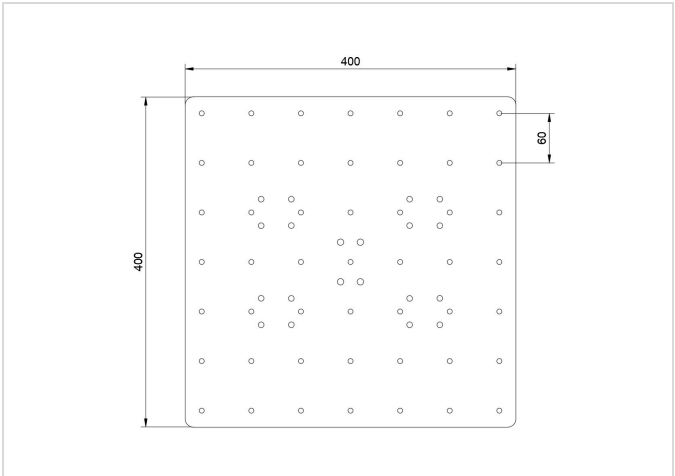
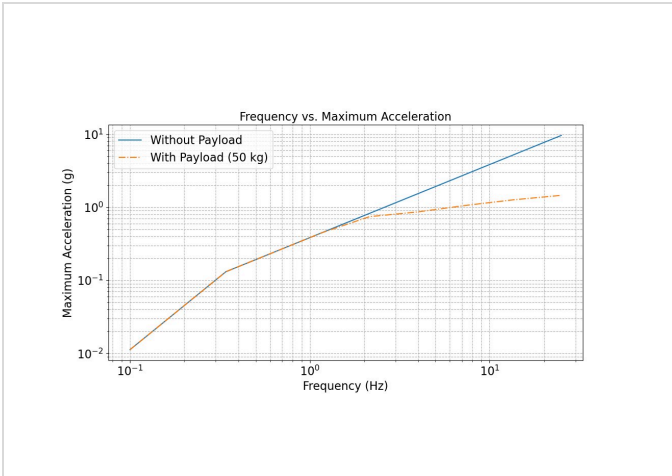
Multi-year extended coverage beyond the standard one-year limited international warranty.

TECHNICAL SPECIFICATIONS

SPECIFICATION	DESCRIPTION
Type	Electro-mechanical, servo-motor driven
Degrees of freedom	Single (1-axis)
Movement axis	Vertical (Z)
Max displacement	±8.7 in (±220 mm)
Max velocity	23.6 in/s (0.6 m/s)
Max acceleration	1 g @ 110 lb (50 kg) payload
Position resolution	0.004 in (0.1 mm)
Frequency range	0.01 – 25 Hz
Motion duration	≥ 120 s (up to 150 s profiles)
Payload @ 1 g	110 lb (50 kg)
Maximum payload	165 lb (75 kg)
Platform dimensions	15.7 × 15.7 in (400 × 400 mm)
Fixturing grid	M4 × 49 holes, 2.36 in (60 mm) pitch
Table dimensions	38.6 × 15.7 × 5.9 in (98 × 40 × 15 cm)
Mounting	Brackets for vertical-direction mounting (included)

SPECIFICATION	DESCRIPTION
Control unit dimensions	13.0 × 10.2 × 5.9 in (33 × 26 × 15 cm)
System weight	~44 lb (20 kg)
Control	Closed-loop feedback, encoder-based
Control modes	Predefined and customized waveforms
Waveform import/export	CSV, variable sampling rate
Real-time monitoring	Displacement, velocity, acceleration
Communication	USB and Ethernet
Software platforms	Windows, macOS, Linux
Software license	Permanent, unrestricted; free lifetime updates
Input power	110 or 220 V AC, 50/60 Hz, 600 W max
Operating temperature	32 – 104 °F (0 – 40 °C)
Storage temperature	32 – 140 °F (0 – 60 °C)
Humidity	Up to 80%, non-condensing
Warranty	1-year limited international

PRODUCT GALLERY



Corporate Headquarters:**QUAKELOGIC INC.**

2008 Opportunity Dr., Suite 130
Roseville, CA 95678, USA

Monday – Friday

9:00 AM – 5:00 PM (PST/PDT)

Contact Us:

Phone: +1(916) 899-0391

Email: sales@quakelogic.net

Web: products.quakelogic.net

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-40Z

