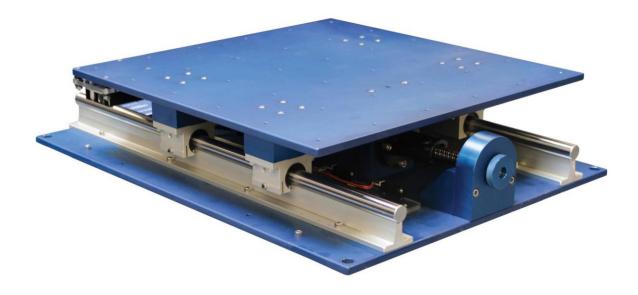


# **Professional Lab. Testing Machines**

ProLab® PLMT-ST1 Series electromechanical Single-Axis Bench-Scale Shake Table is a mid-size, open architecture, single-axis simulator ideal for teaching and doing research in structural dynamics, earthquake engineering, and other topics related to structural, earthquake, and civil engineering. Users can apply sine waves, chirp signals and scaled earthquakes, such as the Northridge, Kobe, and El-Centro supplied, to study their effects on buildings, bridges, and various materials. Additional earthquake profiles can be downloaded from the PEER Ground Motion Database and scaled down for replaying on the Shake Table II. By combining two Shake Table II systems, users can perform bidirectional shaking experiments, or work with higher payloads.

ProLab Shake Table simulates earthquakes using real records, as well as operates waveforms such as sine, triangle etc. or any user defined acceleration or displacement profile. The system is fully controlled via computer software, which is included in the package. It is commonly used in Civil Engineering departments. It can also be used for structural mechanics, earthquake, soil and geological engineering tests and calibrating accelerometers and seismic instruments.



- o Standard uniaxial and biaxial options are available.
- o Custom designs are possible for more degree of freedom needs.

| System:                | Servo Electromechanical system with closed loop control. |
|------------------------|--|
| Degree of freedom:     | Single   |
| Table dimensions:      | 500 x 500 mm   |
| Operational bandwidth: | 10Hz *Contact us for other requirements                  |



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| Control Unit:        | EDCi Controller *German Made   |
|----------------------|--|
| No of channels:      | 2 internal and 3 extra optional channels for extra sensors like strain gauge, LVDT etc |
| Software:            | Universal Simulation Software  |
| Working Stroke:      | ±100mm *contact us for other requirements  |
| P. Supply (Voltage): | 220 V 50/60 Hz   |
|                      |  |

#### **Features and Benefits:**

- Precise positioning using high-resolution encoder and low-backlash ball-screw actuator
- Customizable for xy motion. Easy integration of sensors, actuators
- Safe, reliable, easy operation with standalone software, and low maintenance
- Flexible Scaling and playback of earthquake data supported
- Built-in limit switches for improved safety
- High-resolution optical encoder for precise positioning

## Measuring and control electronics:

As universal digital measuring and control electronics for testing machines, a Doli EDCi controller is used. It is installed in the control cabinet and can be operated with a The remote control. control electronics enables a fully automatic test execution with given load speeds for force, position and strain controlled tests. With sensitive and adjustable break detection, the



failure of the sample is detected early. Communication to the PC: Ethernet socket / USB 2.0

### **Technical data EDCi:**

- Expansion option: 3 iSI modules (2 onboard)
- Data acquisition and control speed: 2.5kHz

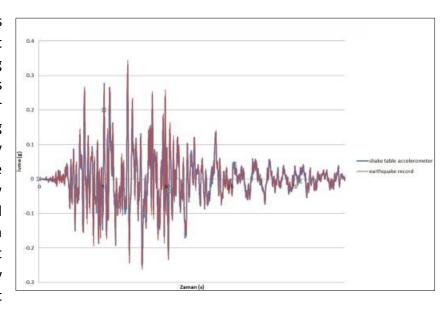


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- Automatic sensor recognition through intelligent sensor plug SGS
- Universal digital IO interface, connection for 8 digital inputs and 8 digital outputs,
  24V DC
- Machine control, control output analog ± 10 V or various digital interfaces
- Connection for display / operating unit Remote Machine Control RMCi with emergency stop option
- Connection for incremental digital sensors, e.g. for position measurement
- iSYNC interface for multi-axis applications. Connection of several EDCi.
- Analog input amplifier (e.g. for load cell) with DC supply with a resolution of 20,000,000 steps
- '+/- 10V control output
- Ethernet RJ45, communication with PC. 10/100Mbit
- USB 2.0, communication with PC
- Serial interface for external electronics (optional)

#### **Universal Simulation Software:**

Universal Simulation Software is the testing industry's powerful and advanced testing software. Its intuitive workflows are designed to simplify operator training, increase testing efficiency, and minimize safety hazards. User can Configure unlimited Live Displays to show force, displacement, time, and results to provide users with immediate feedback on current test status. Graphs, most typically displaying force vs. displacement



data or stress vs. strain data, can easily be viewed in more detail by pinching to zoom. Multiple graphs can be displayed in the workspace, including control charts in a completely customizable layout. Create customized report templates that ensure a professional and consistent style for reporting test results. Reports can be generated, printed, and emailed with the press of a button. Report format options include CSV and PDF.