# Automatic Soil Direct Shear Machine

CANTROL
Construction Materials Testing Equipment

This PLC base processor system based advanced model, is a stand-alone machine, driven by two high-resolution servo-motor with epicy-clical reduction gear with reduced backlash. One of servo-motor closed loop system for the automatic application of the axial force is used for applying axial stress, with the main advantage of eliminating the manual loading of the dead weights. Excellent and high resistance stainless steel material has been adopted for the carriage of the shear box. It offers excellent resistance to corrosion, wear and tear and is resistant to all chemicals found in a soil specimen. The carriage is lay down on two stainless steel liner rail bearings and easy to clean.

**Standard:**

ASTM D3080, AASHTO T236, BS 1377:7, CEN-ISO/TS 17892-10 and NF P94-071

## Models:

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|---|---|
| 110V, 60Hz. Single phase | 2821011 |
| 220V, 50Hz. Single phase | 2821012 |

## This set consists of:

- PLC base processing controller system
- Uniform loading by using Servo-Gearmotor for both shear stress and normal stress (no need any dead weights for normal stress).
- Pre-set normal stress from 0.01-0.5MPa
- -+10kN load cell with resolution of 2N for shear stress
- -+10kN load cell with resolution of 2N for normal stress
- Adjustable horizontal loading rate in range of 0.015-10 mm/min
- Real time maximum and online force indicator
- Equipped with safety micro-switch for maximum horizontal displacement
- 20mm horizontal and vertical displacement measuring sensors with resolution of 0.01 mm
- Connect to PC via RS232 or USB
- PC Software connect and data recording of Shear stress-displacement and shear stress-normal stress and calculating cohe-sive (C) and friction angle (ϕ)
- Digital LCD touchscreen 7” display
- All accessory, complete set of stainless steel box, perforated bronze powdered plates.
- Calibration method using internal Software
- Ability to draws shear stress-shear displacement graph
- Ability to draws shear stress-normal stress graph
- Ability to draws shear displacement-vertical displacement graph
- Dimension: WxDxH (800x440x680 mm)
- Weight: 86 kg
- Power supply: 800W, 110V, 60Hz. Single phase
  800W, 220V, 50Hz. Single phase

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