Automatic Soil Direct Shear Testing Equipment

Ye Chance

Design & manufacture materials Testing Equipment.



Computer-controlled pneumatic loading system. Pressurize weight is not required.

- Computer programs automatically control shearing speed.
- The testing parameters are read in accordance to SOP.
- Computer control for full automation operation to minimize the man-made errors.
- Generates complete reports.

Instead of conventional weights, this computer-controlled full automation soil direct shear testing apparatus uses computer-controlled server for pneumatic positive stress supply system. Users can set the positive stress added to the object and shearing speed through the software. The setting is processed in algorithm, and then the signals are transmitted to the automated gearshift system. When the gear wheel and motor revolution are adjusted, the machine begins shear testing.

The purpose of testing is to obtain accurate parameters and complete report, thus, testing report is equally important. The testing report includes relationship curve for shear deformation and settlement for each specimen, relationship curve for positive stress and shear stress for two or more specimens, in order to obtain shear angle and cohesion.

Technical Specification:

Mechanical Operation: Computer-controlled full automation operation.

Capacity: Positive stress: maximum bearing is 550kgf. Shearing force: maximum bearing is 250kgf.

Differential Transformer: shear deformation detection electronic strain meter, 0-15mm, resolution 0.00023mm/div.

Settlement detection electronic strain meter, 0-10mm, resolution 0.00015mm/div.

Shearing speed controlled servo system:

The system allows shearing speed from 0.05mm/min to 5.0mm/min. The resolution for speed control is 0.003 mm/min.

Pneumatic positive stress supply system: maximum 550kgf.

Correct precision: Within the range of +/- 1% of the read value.

Computer: 32-bit computer mainframe, 256MB RAM, 15" CRT color monitor, 40GB hard disk, 52X CD-ROM.

Power: 220V AC.



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