

Product Name :
Direct and Residual Shear Machine

Product Code :
TEST5194RFQLAB-0019



Description :

Direct and Residual Shear Machine

Technical Specification :

Direct/residual Shear Machine

The Digital Residual Direct Shear Apparatus is used for determination of the direct shear strength of soils specimen. The process is known as shear failure and occurs when shear stresses set up in the soil mass exceed the shear resistance which the soil can offer, i.e. its shear strength.

Speed range: adjustable from 0.00001 to 9.9999 mm/min (present via firmware)

Max. shear force: 5000 N

Max. vertical load: 500 N 5000 N using 10:1
lever-arm device

Speed drive ratio: stepper motor 1/10000 resolution

Horizontal travel: preset via firmware up to 20 mm

Displacement limits: controlled by optical safety switch

Digital display: 4-row/20-character LCD. Easy to operate

With the membrane keyboard

Specimen sizes: 60 and 100 mm square; 50, 60, 63.5 and 100 mm diameter

Overall dimensions: 953*387*1180 mm (w*d*h)

Weight: 120 kg

Accessories of shear

These shear box assemble for 60 or 100 mm

Box assemblies: diameter spacimet

The box is manufactured from brass and is designed to confine the specimen whilst permitting free drainage of the surrounding water. The complete assembly consists of a square box with rigid-walled round or square hole, with a loading pad, base plate, 2 plain grid plates, 2 perforated grid plates, and 2 porous plates.

Weight: from 2.5 to 4 kg

Shear box assembly for 60 mm square specimens

Shear box assembly for 100 mm square specimens

Shear box assembly for 50 mm diameter specimens

Shear box assembly for 60 mm diameter specimens

Shear box assembly for 63.5 mm diameter specimens

Shear box assembly for 100 mm diameter specimens

Mechanical (analogue): load ring, 2000 N capacity, with adapter, or alternatively

Measuring device: load ring, 5000 N capacity, with adapter dial gauge for measuring vertical deformation, 10 mm travel, 0.002 mm resolution

Dial gauge for measuring horizontal deformation, 30 mm travel, 0.01 mm resolution

Electronic measuring devices load cell, 5 kn cap., complete with adapters

Linear potentiometric transducer, 25 mm travel, for horizontal displacement, complete with mounting block

Data acquisition and processing system

Direct and residual shear geo-analysis template BS

Weight sets:

Direct and residual shear geo-analysis template ASTM

Weight set, 37.5 kg in total, comprising: 2*0.25, 2*0.5, 2*1, 3*2, 3*4 and 2*8 kg weights.

Weight sets, 34 kg in total comprising: 2*1, 1*2

And 3*10 kg weights. (additional)

Single slotted weights

Slotted steel weight, 0.25 kg \pm 3 g.

Slotted steel weight, 0.5 kg \pm 3 g.

Slotted steel weight, 1 kg \pm 5 g.

Slotted steel weight, 2 kg \pm 5 g.

Slotted steel weight, 4 kg \pm 5 g.

Slotted steel weight, 8 kg \pm 10 g.

Slotted steel weight, 5 kg \pm 5 g.

Slotted steel weight, 10 kg \pm 10 g.



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