

# LARGE DIRECT/RESIDUAL SHEAR

## SHEARTRAC III

The ShearTrac III system is capable of performing the consolidation and shearing phases of a direct or residual shear test on a  $305 \times 305 \times 205$  mm ( $12 \times 12 \times 8$  in) soil/aggregate specimen. With additional accessories, the same system can also perform direct simple shear, interface shear, or rock shear testing. Testing is performed under fully automated control with convenient monitoring and instant test results. It consists of a computer-controlled unit using independent, electro-mechanical micro-stepper systems to apply highly precise vertical and horizontal loads.

- Built in safety features
- Smart and sophisticated technologies to simplify testing
- Repeatable, reliable, and accurate results you can trust
- Real-time and remote test parameter changes for quality control
- Convenient reporting and data export
- Faster, smarter, better: designed with full automation and manual control options
- Easy upgrade to perform additional test types
- Designed and manufactured in the USA

### **Applicable Test Standards**

- ASTM D3080, D5607, D6528
- AASHTO T236
- BS 1377-7
- ISO/TS 17892-10
- AS 1289.6.2.2



Standard Large Direct/Residual Shear System

## LARGE DIRECT/RESIDUAL SHEAR

### **SHEARTRAC III**



## **TECHNICAL SPECIFICATIONS** LOAD CAPACITY Up to 90 kN (20 klbf) vertical Up to 90 kN (20 klbf) horizontal **VERTICAL MOTOR** Micro-stepper system with built-in controls **HORIZONTAL MOTOR** Micro-stepper system with built-in controls **SPEED RANGE** 0.00003 to 7.5 mm per min (0.000001 to 0.3 in per min) **VERTICAL TRAVEL** 100 mm (4 in) HORIZONTAL TRAVEL +/- 100 mm (4 in) **DIMENSIONS** 610 x 1194 x 1168 mm (24 x 47 x 46 in) **WEIGHT** 311 kg (685 lbs) **INCLUDED** • GeoNet-U USB 2.0 network adapter and cable to link to PC/laptop · DS4 software module to automatically run and report tests **ACCESSORIES** • Reduced sample size inserts - 152 mm (6 in) or 205 mm (8 in) Gripping plates · Rock shear rings and jig set · Direct simple shear hardware • DS4.REPORT: editing/reporting software for multiple tests **WARRANTY** 12 month warranty; extended warranties available User-Friendly Interface File View Run Calibrate Control Report Options Help Project Specimen Water Content Read Table Test Parameters Consolidation Table Shear Table Shear Control Displacement Displacement Displacement

Displacement

#### Typical Test Output (example) DIRECT SHEAR TEST by ASTM D3080 c' = 0.536 psi φ' = 42.9 tan φ = 0.93 psi 0.3 Horz. Deforme 0.000 DS-2 XYZ2 DS-3 XYZ3 XYZ1 0.005 Area, in<sup>2</sup> 4.9087 4.9087 Height, in Water Content, Dry Density, pcf 98.43 98.93 99.82 64.92 0.68073 0.988 60.68 0.65734 63.41 0.97922 0.97 0.025 0.66057 0.6229 Dry Density, pct 98.63 0.030 79.07 78.24 71.43 Void Ratio 0.67729 0.6369 0.035 1.0214 5.0412 12.07 Max. Shear Stress, ps 1.4004 5.3646 11.722 1.1247 Time to Failure, min 18.963 22.002 0.004 roject: ABC Landfil Checked By: aw Tested By: fd Geocomp Test No.: DS-1 Sample Type: remolded Typical Test Output (example) RESIDUAL SHEAR TEST Cumulative Horizontal Displacement, in 0.0 Cumulative Horizontal Displacement, in **⊳** Geocomp Sample Type: tube

V.3 @Geocomp 5/2024