



Shearmatic 300 – Large Shear Testing Machine

Standards: [ASTM D3080](#), [ASTM D6243](#), [BS 1377-7](#),
[EN ISO 12957](#), [ASTM D5321](#)



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Description

The [Shearmatic 300](#) automatic machine is ideal for testing geosynthetics and also soil and other materials that contain large particles of up to 20 mm largest dimension. Sample sizes up to 300 mm square can be tested, with inserts allowing the testing of smaller sample sizes. See accessories.

Using a large sample is possible to gain a more representative indication of shear strength. Furthermore, the large shear box can be used to obtain the angle of friction between many materials. Particular applications include the construction of earth dams and other embankment work.

The machine includes a 100 kN load cell and linear potentiometric transducers 100 and 50 mm travel with mounting brackets and a shear box.

Main Features

- Ideal for testing Shale, Industrial slag, Brick rubble, Colliery spoils, Geosynthetics
- Sample size up to 300 mm
- 100 kN shear and consolidation force



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- Sleeplessly variable speed control from 0 to 11.00000 mm/min
- Automatic hydraulic application of pre-set consolidation steps (up to 50)
- Automatic test management from consolidation to failure: the operator is only requested to remove the clamping screws of the shear box
- The straight connection between shear box, drive unit, and load cell for the axial transmission of the horizontal force along the shearing plane, instead of the classic "swan neck"
- Easy and immediate setup of the test parameters via the large digital graphic display
- Possibility to set different speeds and travel (forward and reverse) in the residual shear tests
- Each single step of axial force can be applied instantaneously or by means of a linear ramp in a pre-set time interval
- Different and independent data recording for consolidation and failure
- Different protocols of data downloading via RS 232 serial port

Specifications

NG-Shearmatic	
Sample Size	Up to 300 mm. Can be reduced to 150 mm using NG-WF2304/1 150 mm sample insert. See accessories.
Shear and Vertical Force	100 kN
Speed Range	Sleeplessly variable from 0 to 11.00000 mm/min
Maximum Travel	75 mm
Steps of Consolidation	Up to 50
Data Acquisition	RS232 serial port for use with Direct and residual Geo-Analysis templates (see accessories)



NG-Shearmatic	
Power	2000 W
Overall Dimensions	147 x 76 x 157 cm
Approximate Weight	800 kg

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