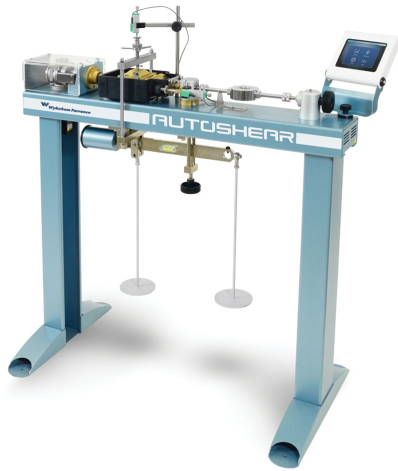


DATA SHEET

Direct and Residual Shear Testing Machine AUTOSHEAR



AUTOSHEAR 27-WF21A60 with accessories. The horizontal loading system: loading ram, shear box, load-measuring system are perfectly aligned to avoid distortions with the possibility of mechanical backlash adjustment.

General description

The Autoshear is an automatic machine for direct/residual shear testing. It incorporates a high-resolution stepper motor fitted with a high precision load transfer mechanism.

Via the large 6" touch screen colour display the user can start, pause and stop the test, select the data-recording mode, view the readings and the diagrams during the test execution and carry out the transducers calibration (load cell and two displacement transducers).

The axial transmission of the horizontal force adopts a straight connection through shear box, shaft and load cell. This design avoids the load measurement inaccuracies occurring with the widely used "swan neck" basic design.

A high quality techno-polymeric material has been adopted for the carriage of the shear box, offering excellent resistance to corrosion, wear and tear and to the chemicals often mixed with the soil specimens.

Furthermore, this polymeric carriage is lightweight and easy to clean.

Vertical load is applied directly to the specimen via a loading yoke and a weights holding arm which amplifies 10 times the applied value. Load cell and displacement transducers, weight and shear box assembly shall be ordered separately (see accessories and related products)

Load ring and dial gauge are also suitable for manual recording.

Standard complete configuration is composed by:

- Autoshear
- Shear box (see accessories and related products)
- Vertical displacement transducer (see accessories and related products)
- Horizontal displacement transducer (see accessories and related products)
- Load cell (see accessories and related products)
- Set of Weight (see accessories and related products)
- Template for data processing (see accessories)

Main features

- User interface **6" touch screen colour display for numerical and graphical** plotting of the readings
- Maximum horizontal force: **5 kN**
- Maximum vertical force: **5 kN, using the 10:1** cantilever device
- Three analogue channels. one for load cell and two for displacement transducers

DATA SHEET

- Effective channel resolution: **131,000** points
- Infinitely variable speed from **0.00001 to 15.0000 mm/min**
- High stiffness **load chain shear box - driving head - load cell**
- Compatible with **shear boxes up to 100 mm** diameter or square
- **USB pen drive** for unlimited storage capacity and TXT format data output
- **Optional PC control via LAN** port and dedicated software
- Sturdy shear box **techno-polymeric carriage** untouchable by corrosion
- **Adjustable speed and travel** (forward and reverse) for residual shear test
- Number of cycles adjustable from **1 to 50**
- Specific and independent data recording for **consolidation** and failure **stages**

Standards

- ASTM D3080
- AASHTO T236
- BS 1377:7
- EN 17892-10

Specifications

Maximum shear force: 5000 N

Maximum vertical load: 500 N or 5000 N using 10:1 cantilever loading device supplied with the machine

Maximum horizontal travel: 23 mm

Test speed: from 0.00001 to 15.00000 mm/min

Maximum number of a shear cycles : 50

Sample type and size: up to 100 mm square or round

Overall dimensions: 1040 x 530 x 1200 mm (l x d x h)

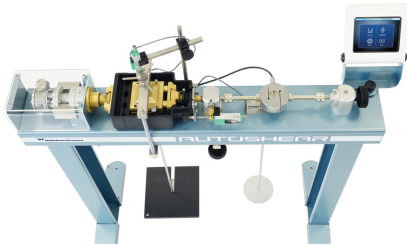
Weight approx.: 60 kg

Multivoltage: Multifrequency power supply 230 V, 50 Hz or 110 V, 60 Hz



Detail of shear box housing made of high resistance techno-polymeric material and digital measurements.

DATA SHEET



Detail of high stiffness load chain shear box - driving head - load cell

Products

27-WF21A60

AUTOSHEAR - Direct and residual shear testing machine with automatic built-in data acquisition. 220-100 V / 50-60 Hz / 1 PH.

Accessories and consumables

27-WF0215/B

Shear box for square specimen 60x60mm

27-WF0216/B

Shear box for square specimen 100x100mm

27-WF0219/B

Shear box for 63.5mm dia samples

27-WF0222/B

Shear box assembly for 100mm diameter sample

30-WF6207

Linear potentiometric transducer, 10mm travel, with 6 pin Lumberg connector complete with mounting block

30-WF6208

Linear potentiometric transducer, 25mm travel, with 6 pin Lumberg connector complete with mounting block

30-WF6016/T2

Direct and residual Shear Geo-Analysis for MS EXCEL Template according to BS 1377:7

30-WF6016/T9

Direct and residual shear Geo-Analysis template conforming to ASTM D3080

27-WF21A60/SW

Autoshear software activation code. For remote control and data acquisition from Autoshear (27-WF21A60), multiple units connectable to a single PC.

27-WF0377/ST

5 kN load cell, complete with adaptors for shear machine 27-WF20D60 and WF21A60.

27-WF0230/C3

DATA SHEET

Set of slotted steelweights tot.37.5kg: 2x0.250kg;2x0.500kg; 2x1kg; 3x2kg; 3x4kg; 2x8kg.

27-WF0230/C4

Additional set of slotted steel weights: 2x1kg; 1x2kg; 3x10kg.

27-WF0218/B

Shear box for 60mm dia samples