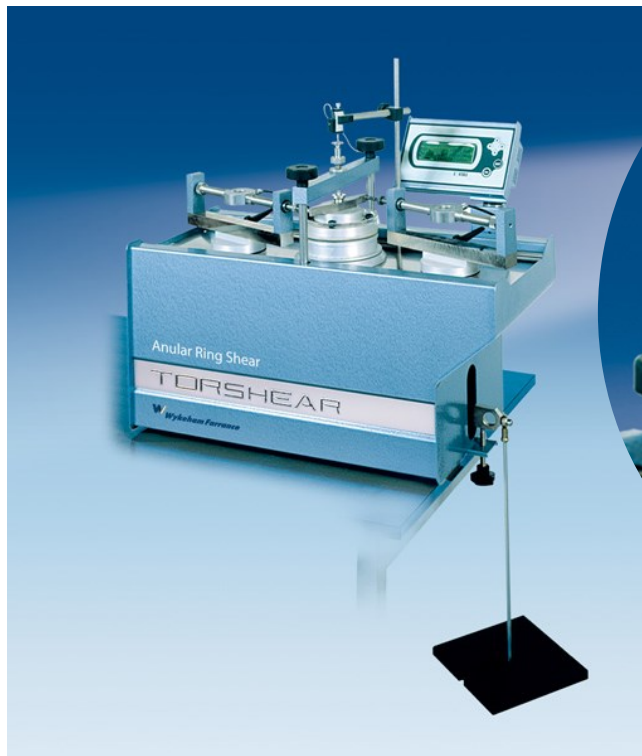


Geotechnical: Direct/Residual Shear

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Direct/Residual Shear



30-WF6207 Linear potentiometric transducer

27-WF2202 TORSHEAR, Bromhead ring shear apparatus

GENERAL DESCRIPTION

The TORSHEAR apparatus tests the residual shear strength of remoulded soil samples. The main advantage of this method compared to direct shear test consists in the continuous shear with a constant area during all the test long. This method allows us to recreate in the laboratory exactly the the field conditions, giving very accurate residual shear strength values. The sample is loaded vertically between two porous stones by means of a counter balance 10:1 ratio lever loading system. A rotation is imparted to the base plate and lower platen by means of a variable speed motor. The settlement of the upper platen during consolidation or shear can be monitored by means of a sensitive dial gauge or linear transducer bearing on the top of the load hanger. Torque transmitted to the sample is reacted by a pair of matched load measuring rings or load cells. Linear transducer and strain gauge load cells can be connected to the 30-WF6016 GEODATALOG for data acquisition and processing. See accessories. Using the waterproof membrane keyboard and the LCD display with 4 rows and 20 characters, it is possible to set the speed in deg/min, using also the fast approach for sample positioning. The test can be stopped using the keyboard or setting a limit of rotation or time. This apparatus is known as *Bromhead Apparatus*. Dr. Bromhead of Kingston University designed the Ring shear apparatus to overcome certain disadvantages of a conventional shearbox. Dial gauge or linear transducers, load ring or cells and weights are not included and have to be ordered separately. See accessories.

MAIN FEATURES

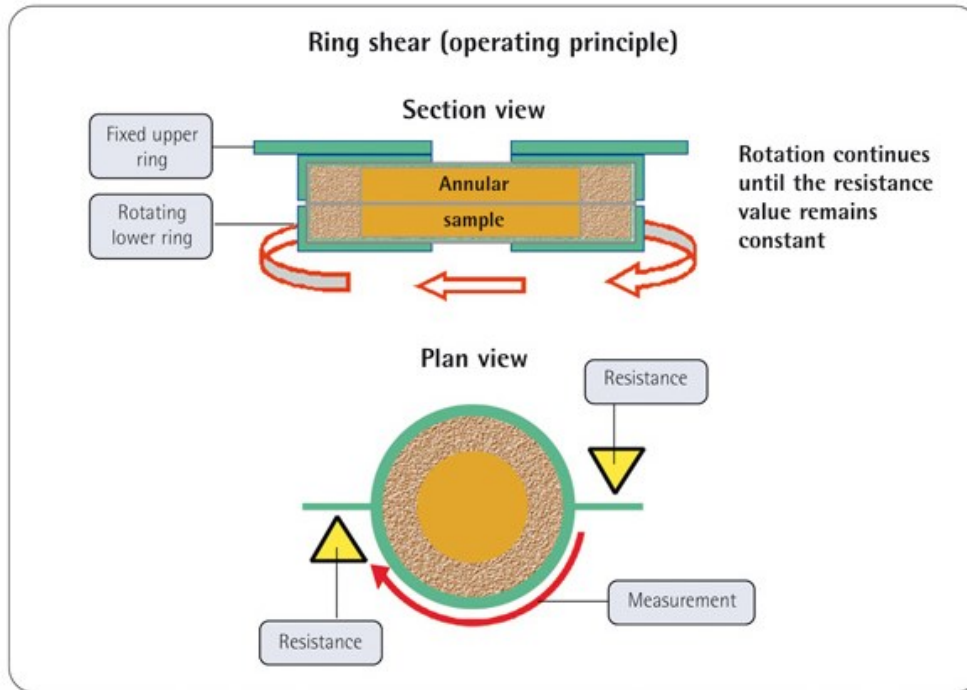
- Microprocessor controlled drive system
- Speed range adjustable from 0 to 180°/min
- Rapid approach without any limit of rotation
- Serial port RS 232 for PC remote control
- Two measurement options: mechanical with load rings and dial gauge, and electronic with Data acquisition, with load cells, displacement transducer and Geodatalog Data acquisition system



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TECHNICAL SPECIFICATIONS

- Speed range: 0.001 to 180°/min
- Maximum shear stress: 500 kPa
- Maximum vertical stress: 1000kPa (lever ratio 10:1)
- Specimen dimensions: 40 cm² (internal dia. 70 mm, external dia. 100 mm, thickness 5 mm)
- Power rating: 570 W
- Overall dimensions (lxdxh): 770x400x750 mm (excluding lever)
- Weight approx.: 72,5 kg

ACCESSORIES

Electronic measurement option

- 27-WF2202/3** Pair of load cells 1 kN cap. with adapters
- 30-WF6207** Linear potentiometric transducer, 10 mm travel, complete with mounting block
- 30-WF6016** GEODATALOG, 16 channels data acquisition unit, complete with Datacomm software for PC
- data acquisition. 110-240 V, 50-60 Hz, 1 ph.
 For more information see Geodatalog, Data acquisition system.
- 30-WF6016/T3** Ring shear Geo-Analysis template.

Mechanical (manual) measurement option

- 27-WF2202/1** Pair of matched load rings, 1 kN capacity
- 30-WF6401** Dial gauge 10x0.002 mm

Weights for vertical load

- 27-WF2202/2** Set of slotted steel weights, total 50 kg

Stand (optional)

- 27-WF2202/4** Metal stand for 27-WF2202 apparatus

