

TORSHEAR EmS

Automatic Ring Shear Testing Machine
for Residual Strength of Soils





Torshear EmS is a versatile and fully automatic ring shear testing machine that benefits from the new low maintenance, efficient and environmentally-friendly Electromechanical Servoactuation (EmS) technology.

Silent, compact and high-performing, the Torshear EmS testing system can be run stand-alone or via our ingenious software that can connect up to six units with just one PC, enabling you to expand your laboratory gradually and seamlessly.



Fully automatic standalone ring shear soil testing system managed by local user interface with 6" touch screen high resolution color display for performing torsional ring shear test in drained condition to determine the residual shear strength of cohesive soil.



Flexible and expandable with optional dedicated software — choose to control the unit either via the Integrated local user interface or with your PC. Gradually connect up to six units via LAN port using the same PC software allowing you to build your laboratory efficiently.



Environmentally friendly and quiet — the Torshear EmS benefits from the new Electromechanical Servoactuation (EmS) technology.



High-performing with maximum vertical stress 1,200 kPa and maximum shear stress 1,000 kPa, infinite variable speed from 0.00001 to 1000°/min, with pre-shearing stage selectable and adjustable number of cycles of shearing. Test can be perform with vertical load control or at constant volume.



Lightweight and compact system is easy to handle, can be located on a standard bench, has a small footprint and maximizes the use of space in your laboratory.



Smart and easy-to-use system with removable load cells and displacement transducers simplifies testing, maintenance and calibration.

Long-life and low maintenance with corrosion-free, stainless steel ring shear box fitted with easy removable sintered porous stone with specialized pattern design offering excellent resistance to corrosion, wear and tear to chemicals often mixed with soil specimens.



Versatile and Fully Automatic

ASTM D6467 | ASTM D7608 | BS 1377:7



For more details,
please refer to our
dedicated webpage

10 mm displacement transducer
for measuring vertical settlement.*

**High performing 5 kN capacity
load cells** to measure vertical force.*

Easily removable 1 kN load cells
(for re-calibrating) deliver
accurate measurement of
torsional shear stress.*

**Reliable, smooth and
accurate torsional
shear application**
thanks to the rotational
shearing action
continuously applied by
an electromechanical
stepper motor.



Fast, smooth and accurate loading
delivered by integrated optimized
PID closed-loop control with precise
load ensured using a load cell directly
mounted on the loading tip.

**Large 6" intuitive
touchscreen color
display Start,** pause
and stop the test,
access display readings
during the tests and
perform transducers
calibrations with ease.

**Totally new and
ingenious software**
allowing the remote
control, from a single
PC, of multiple Torshear
EmS machines.

* Supplied with traceable calibration certificate.



40 cm² stainless steel
ring shear box fitted
with easily removable
sintered porous
stones with specialized
pattern design.

Technical Specifications

- **Maximum Vertical stress:** 1,200 kPa
- **Maximum Shear stress:** 1,000 kPa
- **Test speed:** from 0.00001 – 1000°/min
- **Weight approx.:** 60 kg
- **Specimen dimensions:** Internal dia. 70 mm; external dia. 100 mm
- **Sample Area:** 40 cm²
- **Sample thickness:** 5 mm (various thicknesses available on request)
- **Constant Volume option :** Yes (only via software)

Ordering Information

**27-WF22E02 Torshear EmS –
Electromechanical Servoactuation
technology, automatic ring
shear testing machine.**
220-100 V / 50-60 Hz / 1 Ph

27-WF22E02/SW Torshear EmS Software

Software activation code for remote
PC control and data acquisition
allowing you to connect multiple
units connectable to a single PC.

Wykeham Farrance Customer Care

Wykeham Farrance is the Soil and Rock Testing Division of CONTROLS. As one of the longest established manufacturing companies in the world of Construction Materials Testing solutions, we are dedicated to supplying high quality, accurate, affordable, easy to use systems.

As a valued customer of CONTROLS, you will receive continuous, expert support and advice for your Wykeham Farrance equipment. Furthermore, we can offer full installation and training in the correct operation of your equipment.

For support from our expert Customer Care Team, contact your local CONTROLS office / distributor or email wfsupport@controls-group.com.

For more information, please visit www.controls-group.com.

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