

# Geotechnical: Consolidation

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## Consolidation Systems

Since 1941  
**W. Wykeham Farrance**  
 PIONEERS IN ADVANCED SOIL TESTING



26-WF0338/A  
 Permeability at-  
 tachment fitted  
 to the 26-  
 WF0302 with 26-  
 WF0320 cell

Three oedometers 26-WF0302, complete with cells, 30-WF6210 displacement electronic transducers connected to 30-WF6016 GEODATALOG, and 26-WF0312 consolidation bench.

## Front Loading Oedometer

### INTRODUCTION

This test determines the rate and magnitude of consolidation of a soil specimen restrained laterally and subjected to a number of successive increments of vertical loads.

The oedometer consists of a rigid aluminium alloy frame to avoid any distortion under load. The lever arm assembly is supported in precision self-aligning bearings and has three hanger positions for 9:1, 10:1 and 11:1 ratio. The oedometers fit with linear potentiometric transducers, can be connected to the 30-WF6016 Data acquisition unit See accessories and [Data acquisition and processing system](#).

The consolidation test can also be automatically performed with the [ACE - Automatic Computerized Oedometer](#). Consolidation cells, dial gauge/displacement transducer, weight sets and bench are not included and have to be ordered separately. See accessories.

### MAIN FEATURES

- Compact and robust design
- 3 lever arm ratio
- Screw jack support
- Same cell for standard and permeability test
- Possible connection with Data acquisition and processing system



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### Front Loading Oedometer contd;

#### TECHNICAL SPECIFICATION

- Max loading (using 11:1 beam ratio): 1848 kg, corresponding to 9.061 MPa (92.40 kgf/cm<sup>2</sup>) on 20 cm<sup>2</sup> specimen (50.47 mm dia.)
- Overall dimensions: 500x200x750 mm (height less hanger x width x length)
- Weight approx.: 21 kg

#### ACCESSORIES

##### Consolidation cells

To perform either standard or permeability test

Model 26-	Specimen Dia. x height [mm]	Specimen area [cm <sup>2</sup> ]	Cell dimension Dia. x height [mm]	Weight [kg]	Calibration disk
WF0320	50.47x20	20	139x74	1.3	26-WF0320/9
WF0321	63.50x20	31.67	139x74	1.3	26-WF0321/9
WF0325	71.40x20	40	139x74	1.3	26-WF0325/9
WF0326	75x20	44.16	139x74	1.3	26-WF0326/9
WF0335	112.80x25	100	200x74	3	26-WF0335/9

#### Weight sets

- 26-WF0230/C2** Weight set, 64 kg in total, including: 2x0.250, 1x0.500, 1x1, 1x2, 1x4, 7x8 kg weights.  
**26-WF0230/D2** Weight set, 80 kg in total, including: 2x0.250, 3x0.500, 1x1, 1x2, 3x5, 6x10 kg weights.

#### Axial displacement dial indicators/linear transducers

- 30-WF6401** Dial gauge, 10 mm travel x 0.002 mm divisions, anticlockwise rotation.  
**30-WF6207** Linear potentiometric transducer, 10 mm travel  
**30-WF6042** Transducer extension cable, 6 m long  
**30-WF6044** Transducer extension cable, 12 m long

#### Permeability attachment

- 26-WF0338/A** Permeability attachment with 50 ml graduated burette . Complete with clamps, stand and rubber hose for connection to the cell. Weight 4 kg.

#### Consolidation bench

- 26-WF0312** Bench for up to three oedometers.

#### Data acquisition and processing

Data acquisition and processing system



26-WF0320 Consolidation cell. Also used for permeability test



Slotted steel weights

