

CONSOLIDATION TEST

STANDARDS: ASTM D2435, D3877, D4546 | BS 1377:5
 AASHTO T216 | XP P94 090-1, P94-091
 UNE 103-405, 103-602

The one-dimensional consolidation test of a soil sample enables to ascertain the settlement characteristic over a given period of time. The soil specimen under test is axially loaded and laterally contained.

Loads are applied with progressive increases and the settlement values are read on a dial gauge or on a digital display (through a displacement transducer).

Two different oedometer models are proposed:

S260 Front loading oedometer with dial gauge or digital data acquisition system.

S262N Edotronic, pneumatic, fully automatic touch-screen consolidation apparatus (see next pages).

S260 FRONT LOADING OEDOMETER CONSOLIDATION APPARATUS

Rigidly manufactured from aluminium alloy casting to provide a high degree of accuracy with any frame distortion under load. The load bridge group is supported in high accuracy self-aligning seat balls. The beam provides three loading ratio: 9:1 10:1 11:1 and the beam assembly is fitted with an adjustable counterbalance weight.

Maximum load: 170 kg of slotted weights, corresponding to 1870 kg using the beam ratio 11:1

The oedometer accepts cells up to 100 cm²

Supplied complete with rod holding the weights and coupling block holding the dial gauge or transducer.

Supplied **without**: consolidation cell, weights, dial gauge (or transducer), holding bench which have to be ordered separately.

Weight: 25 kg approx.

ACCESSORIES

S376 DIAL GAUGE 10 mm travel x 0.01 mm subdiv. for vertical displacements.

or:

S375-01 DIAL GAUGE 12 mm travel x 0.002 mm subdiv.

Alternative solution:

S336-11 LINEAR VERTICAL DISPLACEMENT TRANSDUCER, 10 mm travel

S336-30 EXTENSION CABLE 2 metres long, or:

S336-31 EXTENSION CABLE 5 metres long, or:

S336-32 EXTENSION CABLE 10 metres long

S337-51

CALIBRATION process of the displacement transducer to the data acquisition unit of the oedometer.

S260
with cell and dial gauge



S336-11



S334

S260 with cell and S334 Cyber-Plus 8 Evolution

S334 CYBER-PLUS 8 EVOLUTION

8 channels acquisition and processing data system (expandable to 16 channels) colour "Touch Screen" display, it automatically performs test and data processing. Directly connected to PC via USB, it prints the test certificate. Equipped with slots for external Pendrive or SD Card infinite memory supports.

Technical details: see p. 559, Hardware details at p. 18

S260-05N

Software OedoLab Reports - MATEST MADE

Technical Data: see p. 531

BUYER'S GUIDE FOR ONE STANDARD CONSOLIDATION SYSTEM AND ONE AUTOMATIC CONSOLIDATION DATA ACQUISITION/PROCESSING SYSTEM.
S260
 with accessories

S265-01

S334
Configuration for one standard Oedometer apparatus

Configuration for one standard Oedometer apparatus	Model
Front loading oedometer	S260
Oedometer bench (for one or three oedometers)	S265 / S265-01
Dial gauge	S376 / S375-01
Consolidation cell, fixed ring	S268 / S268-05
Spare cutting ring (to combine to the consolidation cell)	S122 / S122-19
Specimen tamper (to combine to the consolidation cell)	S123 / S123-05
Spare porous stones (to combine to the consolidation cell)	S274 / S274-10
Set of slotted weights	S273 / S273-10
Permeability measurement:	
Permeability consolidation cell	S272 / S272-05
Permeability attachment (50 ml burette)	S275
Hollow punch (to combine to the consolidation cell)	S122-04 / S122-20
Spare porous stones (to combine to the consolidation cell)	S274-04 / S274-11

Configuration for one Oedometer apparatus with electronic measurement and data acquisition/processing:

Configuration for one Oedometer apparatus with electronic measurement and data acquisition/processing:	Model
Oedometer with accessories as listed in the standard configuration (without the dial gauge S376), and also:	
Cyber-Plus 8 Evolution, 8 channels (expandable to 16 channels) automatic data acquisition/processing	S334
Displacement transducer (in quantities as the oedometers)	S336-11
Extension cable (in quantities as the transducers)	S336-30 / S336-32
Software OedoLab Reports - Matest made	S260-05N
Gauge blocks to calibrate the transducers	S336-41 / S336-43
or:	
Transducer / Oedometer calibration process	S337-51