

## GEOSTAR<sup>®</sup> CONSOLIDOMETER

Soil samples in the afternoon, results of the test the next morning! This new technology makes consolidation tests up to ten times faster. Tests can now be performed independent of working hours. More precise high-tech information is gained on the behavior of soils. GeoStar consolidation equipment is designed to significantly speed up the determination the consolidation properties of soils. At the same time, the possibility to choose the most suitable test procedure is provided as well the ability to run up to three complete loading units simultaneously.

THE CAPABILITIES OF THE EQUIPMENT (Available test types)

1. Constant pressure ratio test (CPR test), in which the ratio between the excess pore water pressure, at the bottom of the sample and the total load is kept constant.
2. Constant rate of strain test (CRS test).
3. Incremental loading test, with control by the loading time.
4. Incremental loading test, with control by the excess pore water pressure.

Please call for more detailed specifications

MODELS	DESCRIPTION	STANDARDS
S5211	GEOSTAR CONSOLIDOMETER	ASTM D-2435-90, D-4186-89



Consolidometer shown here with customer's computer

## CONSOLIDOMETER



S5121

S5111

These consolidometers are used for determining the rate and amount of consolidation of soils loaded vertically but restrained laterally and permitting escape of water. Samples are carefully trimmed to size, placed in the consolidometer, loaded vertically and the amount of consolidation recorded for different loads and at varying time intervals after each load. Load-consolidation and time-consolidation curves are plotted. The **S5422** or **S5522** load stands are recommended for these consolidometers.

### S5111 FLOATING RING CONSOLIDOMETER

The **S5111** Floating Ring Consolidometer is designed for 2.5" dia x 1" high specimen. The consolidometer is furnished with a combined base and water bath, dial holder, specimen ring and porous stones. The consolidometer is constructed mainly from brass or bronze. The dial is not furnished however Hogentogler suggests the **G3354**.

### S5121 FLOATING RING CONSOLIDOMETER

The **S5121** Floating Ring Consolidometer is very similar to the **S5111** except that it is designed for a 100 cm<sup>2</sup> x 1.5" high specimen.

### S5131 FIXED RING CONSOLIDOMETER

The **S5131** Fixed Ring Consolidometer has a fixed ring and is designed for 2.5" dia specimens. The Consolidometer is furnished with a base, dial support, sample ring, sealing ring, porous stones and standpipes. Construction of the this consolidometer is mainly brass or bronze. The dial is not furnished however Hogentogler suggests the **G3354**.

### S5141 FLOATING RING CONSOLIDOMETER

The **S5141** Floating Ring Consolidometer is very similar to the **S5131** except that it is designed for a 100 cm<sup>2</sup> x 1.5" high specimen.

MODELS	DESCRIPTION	STANDARDS
S5111	FLOATING RING CONSOLIDOMETER FOR 2.5" X 1" SPECIMENS	ASTM D-2435 AASHTO T-216
S5121	FLOATING RING CONSOLIDOMETER FOR 100 CM <sup>2</sup> X 1.5" SPECIMENS	
S5131	FIXED RING CONSOLIDOMETER FOR 2.5" X 1" SPECIMENS	
S5141	FIXED RING CONSOLIDOMETER FOR 100 CM <sup>2</sup> X 1.5" SPECIMENS	

ACCESSORIES	DESCRIPTION
S5115	EXTRA RING FOR S5111
S5125	EXTRA RING FOR S5121
S5135	EXTRA RING FOR S5131
S5145	EXTRA RING FOR S5141

## TABLE TOP CONSOLIDOMETER



The lever loaded table top Consolidometer is constructed from high strength aluminum alloy giving a minimum frame distortion even under high loads. The cell platform accepts samples up to 4" or 100mm dia. The two pivot shaft bearings permit free movement of the beam while maintaining the alignment and a spherically seated needle bearing attached to the yoke assures perfect alignment without side loading. Shocks to the sample are avoided by using the supporting jack while each weight is added.

The apparatus is furnished with a weight set which will give even incremental loading from 1/4 tsf to its capacity on a 2.5" dia sample. The 16 tsf weight set consists of 2-1/4", 1-1/2", 1, 1/2 and 3/4 tsf weights. A 2.5" dia fixed ring cell with a capacity of performing permeability test is included. The cell can be converted to a floating ring cell by adding an adapter set. The Consolidometer is furnished complete with a 2.5" dia fixed ring cell, calibrated weights, .5" travel counter clockwise dial indicator reading to .0001" and instructions. The Consolidometer is available in 16 TSF, 32 TSF, and 48 TSF.

MODELS	DESCRIPTION	STANDARDS
S5261	TABLE TOP CONSOLIDOMETER, 16 TSF	ASTM D-2435 / AASHTO T-216
S5262	TABLE TOP CONSOLIDOMETER, 32 TSF	
S5263	TABLE TOP CONSOLIDOMETER, 48 TSF	
S5361	FIXED RING CONSOLIDOMETER, 2.5"	
S5363	FLOATING RING CONSOLIDOMETER, 2.5"	

ACCESSORIES	DESCRIPTION
S5365	FIXED RING CONSOLIDOMETER, 50 MM
S5373	EXTRA RING FOR S5361
S5377	WEIGHT, 1/4 TSF
S5378	WEIGHT, 1/2 TSF
S5379	WEIGHT, 1 TSF
S5380	WEIGHT, 2 TSF
S5381	WEIGHT, 4 TSF
S5382	LOADING WEIGHT SET

## LEVER LOADING STANDS

These lever loading stands are for fixed or floating ring consolidometers. The precise loading devices with counterbalanced lever systems with hardened steel knife edges and supports and load plates with springs and balls. Stands have welded steel sections and are designed to Purdue and Northwestern University types. The consolidometer, dial gauges and weights are separately. The S5422 lever stand medium capacity is a two unit designed for loads up to 20 tons/sq. ft. on a 2.5" diameter specimen. The stand is

a single lever type with a ratio of 8/1. Furnished with the stand is the S5651 load plate. The S5522 Lever Stand high capacity is a two unit designed for loads up to 52 tons/sq. ft. on a 100 sq. cm. specimen. The stand is a double lever type with ratios of 40/1 and 10/1. Furnished with the stand is the (S5655) load plate. The S5524 Lever Stand is very similar to the S5522 but features four lever sets load plates and a four unit stand. The S5552 is similar to the S5524 but is designed for loads up to 20,000 lbs and also features two levers and a two unit stand.



MODELS	DESCRIPTION
S5422	LEVER LOADING STAND, MEDIUM CAPACITY, 2-UNIT
S5522	LEVER LOADING STAND, HIGH CAPACITY, 2-UNIT
S5524	LEVER LOADING STAND, HIGH CAPACITY, 4-UNIT
S5552	LEVER LOADING STAND, EXTRA HIGH CAPACITY, 2-UNIT

ACCESSORIES	DESCRIPTION
S5429	LEVER STAND, MEDIUM CAPACITY
S5529	EXTRA LEVER SET, HIGH CAPACITY
S5601	WEIGHT LOADING, 1 KG
S5602	WEIGHT LOADING, 4 KG
S5604	WEIGHT LOADING, 16 KG
S5651	LOAD PLATE W/ BALL, 2.5"
S5655	LOAD PLATE W/ BALL, 100 CM <sup>2</sup>

