Displacement

Application Story

Measurement of Soil Compression

The Challenge

For embankments and soil related structures, laboratories will often employ “soil compression” testers to see how soil specimens respond to various axial loads. For this, compression measurement must be recorded to the highest resolution and sometimes over long periods of time.

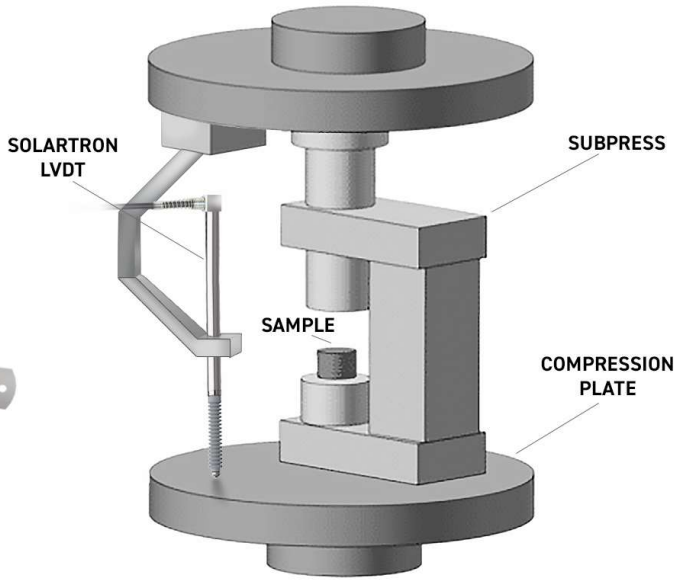
The Solution

Solartron Metrology offers LVDT sensors that meet the needs of Soil Compressors and similar laboratory testing instruments. Advantages include:

- **Excellent value:** Solartron LVDT displacement sensors provide higher resolution than other sensors, yet can still be provided at a competitive price point.
- **No “drift” of measurement:** Solartron LVDT sensors can maintain their accuracy and repeatability over several years, with no loss or drift of readings over time.
- **Rapid Response:** Any change in measurement is immediately output to any data logger or PC, with no signal delay.
- **Endurance:** Solartron sensors have been tested to millions of cycles, and are built in a stainless steel casing to withstand years of abuse, including vibration and heat. Special high temp and low temp versions are available.
- **High Resolution**: Solartron LVDTs offer resolution up to 0.01 micron, showing the slightest change in measurement that Linear Encoders cannot provide.
- **Multiple Outputs:** Solartron offers DC, 4-20mA, TTL, and other analog output options.
- **Network multiple sensors**: Solartron LVDTs are available with its industry leading Digital Orbit® network. With this, up to 200 sensors can be networked and output to a PC or PLC

A Solartron LVDT is connected to an Oedometer, which is used to check a soil’s consolidation properties under different loads

Solartron S-Series transducers are available in multiple configurations, including Free Core and Guided



This soil compression tester has the top plate connected to an LVDT gauging probe

Orbit® – The Total Measurement System from Solartron Metrology

The Solartron Orbit® Digital Measuring System provides a limitless set of measurement solutions, with numerous different interfaces to computers and PLC's.

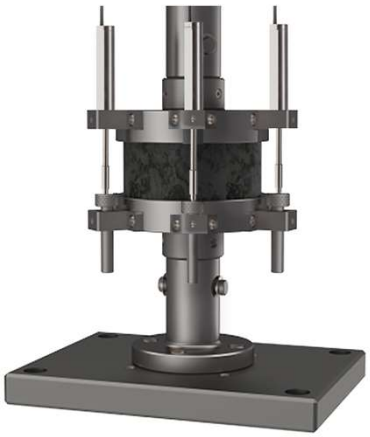
S-Series

Special probes for low temperatures

SI 8500

Compact displacement

S-series transducer monitoring a crack



Measurement of concrete compression

OP Series