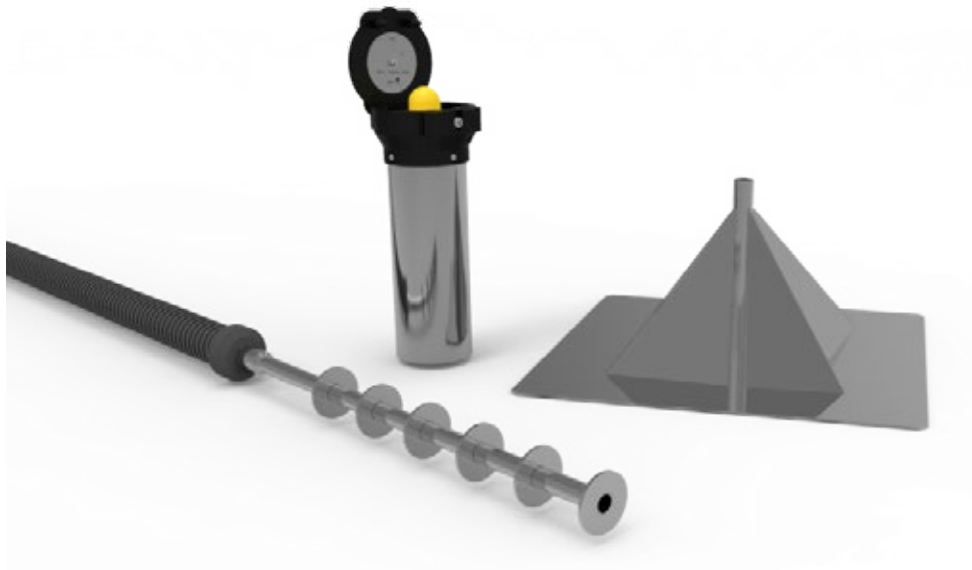


D100

— **FIXED
EXTENSOMETERS**

SETTLEMENT
GAUGES



FIXED EXTENSOMETERS

Fixed extensometers are usually defined as devices placed in embankment fill or inside borehole for monitoring of settlement or heave between two points without use of a removable probe.

Either the Settlement Platform and the Tell-Tale extensometer are based on a riser settlement rod which is respectively connected to a plate buried at the embankment foundation level or grouted inside borehole as a deep benchmark in a firm soil.

Optical levelling measurements to the top of the riser rod provide precise monitoring. Electrical transducer can be used for remote readings without the need of survey crew.

APPLICATIONS

- Settlement below embankments in soft ground
- Direct measurements of ground surface settlement or heave
- Monitoring deformation around underground excavation

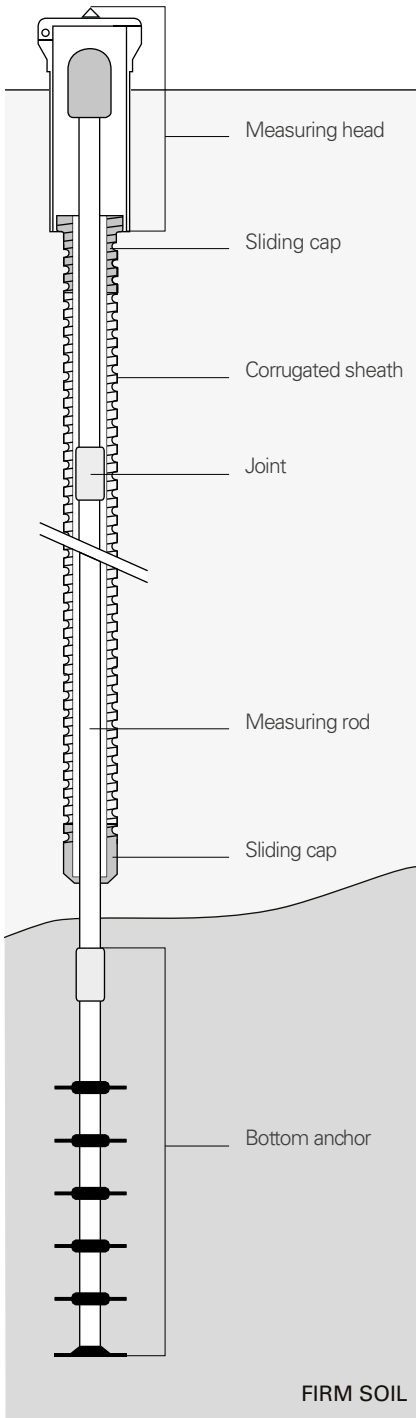
FEATURES

- Providing deep datum for determination of absolute settlement
- Rugged and simple to install
- Automatic reading available with displacement transducer option

 *Meet the essential requirements of the EMC Directive 2014/30/UE*

TELL-TALE (TT) EXTENSOMETER

Tell-tale extensometer is a single point extensometer which is typically used for precise monitoring of ground surface settlement or heave. It consists of a galvanised steel bottom anchor to which a riser measuring rod is attached. Anti-friction corrugate sheath is placed around the riser rod. Optical levelling measurements to the top head of the riser rod provide a record of ground settlement. Sliding caps at the top and at the end of the junction between riser rod and corrugate pipe prevent downdrag forces on the rod.



| | MEASURING ROD OD100A200G0 | CORRUGATED SHEATH OD111PV5500 |
|------------------|------------------------------------|--|
| Outer diameter | 25 mm | 55 mm (nominal) |
| Section length | 2000 mm | supplied in roll |
| Type of junction | external couplings (M25 thread) | continuous (self-screwing connection) |
| Material | stainless steel | PVC |

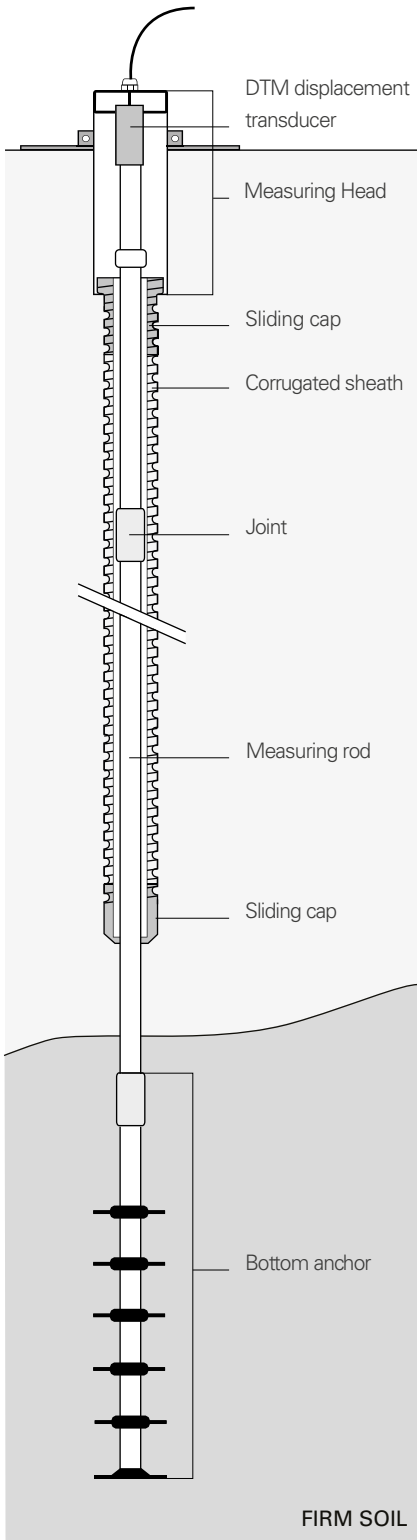
| | MEASURING HEAD OD100TT01G0 | BOTTOM ANCHOR OD100TT60G0 |
|----------------|--|-------------------------------------|
| Description | Protective cap and leveling pin for topographic surveying | Grouting bottom reference anchor |
| Outer diameter | 102 mm | 60 mm |
| Length | 550 mm | 600 mm |
| Material | galvanised steel and PVC | galvanised steel |



Tell - tale measuring head without survey pin

ELECTRICAL TT EXTENSOMETER

Tell tale (TT) extensometers can be equipped with DTM electrical displacement transducer in order to automatize the readings and allow remote monitoring through automatic data logger.



| | MEASURING ROD OD100A200G0 | CORRUGATED SHEATH OD111PV5500 |
|------------------|---------------------------------|---------------------------------------|
| Outer diameter | 25 mm | 55 mm (nominal) |
| Section length | 2000 mm | supplied in roll |
| Type of junction | external couplings (M25 thread) | continuous (self-screwing connection) |
| Material | galvanised steel | PVC |

| | BOTTOM ANCHOR OD100TT60G0 | MEASURING HEAD OD100TTEL1G |
|-------------|----------------------------------|--|
| Description | Grouting bottom reference anchor | Protective cap ready for DTM displacement transducer |
| Diameter | 60 mm | 102 |
| Length | 600 mm | 400-650-1150 |
| Material | galvanised steel | galvanised steel |

| DTM DISPLACEMENT TRANSDUCER | ODTM0AE0250 | ODTM0AE0500 | ODTM0AE01000 |
|------------------------------------|------------------------|-------------|--------------|
| Nominal range | 250 mm | 500 mm | 1000 mm |
| Accuracy Pol MPE ⁽¹⁾ | ± 0.15 % FS | | |
| Repeatability | < 0.08 mm | | |
| Signal output | 4-20 mA (current loop) | | |
| IP class | IP68 up to 2 MPa | | |

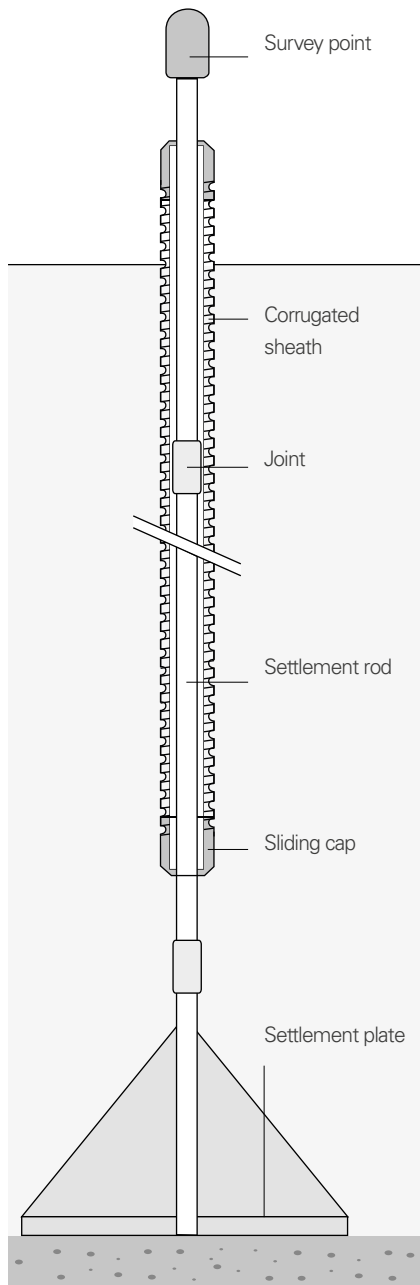
(1) - MPE is the Maximum Permitted Error on the measuring range (FSR). In the Calibration Report, the accuracies of the gauge are calculated using both linear regression (≤ Lin. MPE) and polynomial correction (≤ Pol. MPE)



Tell - tale bottom anchor for datum reference

SETTLEMENT PLATFORM

Settlement platforms are typically used for monitoring settlement below embankments on soft ground. They consist of a galvanised steel square plate to which a riser settlement rod is attached. An anti-friction corrugate sheath is placed around the riser rod. Sliding caps at the top and at the end of the junction between riser rod and corrugate pipe prevent downdrag forces on the rod. Topographic leveling of the top survey point provide a record of plate elevations.



| | SETTLEMENT ROD OD100A200G0 | CORRUGATED SHEATH OD111PV5500 |
|------------------|------------------------------------|--|
| Outer diameter | 25 mm | 55 mm (nominal) |
| Section length | 2000 mm | supplied in roll |
| Type of junction | external couplings (M25 thread) | continuous (self-screwing connection) |
| Material | galvanised steel | PVC |
| | SETTLEMENT PLATE OD100B050G0 | SURVEY POINT OD100T150G0 |
| Dimensions | 500 x 500 x 240 mm | OD 40 mm, 50 mm long |
| Material | galvanised steel | brass |



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