



Model 4600 Settlement System

The Model 4600 Settlement System is designed for the remote measurement of surface or subsurface settlement in fills, surcharges, dams, embankments, etc. A fluid filled tube extends upward, connecting the transducer to a reservoir located in the moving strata or fill. The measurement of fluid pressure indicates the settlement between the sensor and the reservoir. Multiple level systems are also available (please contact GEOKON for details).

Specifications

Ranges ¹	7, 17, 35 m
Resolution	0.025% F.S.
Accuracy ²	±0.1% F.S.
Temperature Range ¹	-20 °C to +80 °C
Dimensions (L × Ø)	305 × 60 mm (reservoir); 191 × 35 mm (sensor)

¹Other ranges available on request. | ²Transducer accuracy established under laboratory conditions.



Model 4660 Settlement System

The Model 4660 Settlement System uses a Pressure Transducer attached to a settlement plate located in the settling ground. The sensor is connected, via two fluid filled tubes extending laterally, to a reservoir located on firm ground away from the area of anticipated movement. Fluid pressure within the tubes is sensed by the transducer, which provides a measure of the elevation difference between the sensor and the reservoir. The tubes are flushable and the closed loop vented transducer/reservoir system is not influenced by barometric pressure.

Specifications

Ranges ¹	7, 17 m
Resolution	0.025% F.S.
Accuracy ²	±0.1% F.S.
Temperature Range ¹	-20 °C to +80 °C
Dimensions (L × Ø)	152 × 51 mm (reservoir); 168 × 25 mm (sensor)
Dimensions (L × W × H)	305 × 305 × 6 mm (plate); 305 × 127 × 45 mm (cover)

¹Other ranges available on request. | ²Transducer accuracy established under laboratory conditions.



Model 3655 / 4655 Multipoint Settlement Systems

The Model 3655/4655 Multipoint Settlement System comprises a series of sensitive pressure transducers connected by a special Nylon tube, which is connected to a liquid reservoir. The Nylon tube is filled with de-aired water or a de-aired water/antifreeze mixture, if necessary. All sensors share the same liquid line and are referenced to the same liquid elevation in the reservoir, which allows changes in the sensor elevations, relative to one another, to be measured. The Model 4655 utilizes VW sensors, while the Model 3655 utilizes Semiconductors with available outputs of mV/V, 0-5 VDC or 4-20 mA.

Specifications

Ranges	(3655) 7 kPa (0.68 m) H ₂ O; 10 kPa (1.02 m) H ₂ O; 17 kPa (1.73 m) H ₂ O; 35 kPa (3.57 m) H ₂ O (4655) 70 kPa (7.14 m) H ₂ O
Resolution	(3655) depends on readout; (4655) 0.025% F.S.
Accuracy ¹	±0.1% F.S.
Temperature Range ²	-20 °C to +80 °C
Tubing	½" Nylon (liquid); ¼" Polyethylene (vent)

¹Transducer accuracy established under laboratory conditions. | ²Other ranges available on request.



Model 4651 Settlement Profiler

The Model 4651 Settlement Profiler consists of a pressure transducer inside a torpedo that is connected by a long liquid filled tube to a liquid reservoir. The torpedo is pulled through a pipe buried in a fill, surcharge, embankment, etc. The transducer gives a measurement of the elevation profile of the pipe, relative to the reservoir located on stable ground. A lightweight aluminum reel is included for storing the liquid tube.

Specifications

Range ¹	7 m
Resolution	0.025% F.S.
Accuracy ²	±0.1% F.S.
Reel Capacity	up to 130 m (4651-1); up to 330 m (4651-2)
Temperature Range ¹	-20 °C to +80 °C (using antifreeze solutions)
Dimensions (L × Ø)	203 × 35 mm (probe); 178 × 610 mm (reel)

¹Other ranges available on request. | ²Transducer accuracy established under laboratory conditions.



Model 4675 High Sensitivity Settlement System

The Model 4675 High Sensitivity Settlement System consists of a series of vessels containing liquid level sensors interconnected by a liquid filled tube. A reference vessel is positioned at a stable location and observation vessels are positioned at different locations at approximately the same elevation. This system is particularly suitable for critical situations where high resolution is required. Settlements as small as ±0.02 mm can be measured.

Specifications

Ranges ¹	100, 150, 300, 600 mm
Resolution	0.025% F.S.
Accuracy ²	±0.1% F.S.
Temperature Range ¹	-20 °C to +80 °C (using antifreeze solutions)
Dimensions	depends on range

¹Other ranges available on request. | ²Transducer accuracy established under laboratory conditions.



Model 46750C Precision Settlement Monitoring System

The Model 46750C Precision Settlement Monitoring System is designed to measure differential settlements with a very high degree of accuracy and resolution, making it suitable for critical applications where expected settlements are small. The system uses a 3" diameter horizontal open channel pipe, half filled with water or antifreeze and fixed to the structure or tunnel under observation. Sensors are situated at required intervals along the pipe and connected to the water via short lengths of tubing.

Specifications

Range ¹	75 mm
Resolution ¹	0.025 mm
Accuracy ²	±0.1% F.S.
Temperature Range	-20 °C to +80 °C (using antifreeze solutions)
Dimensions	depends on range

¹Other ranges and resolutions available on request. | ²Transducer accuracy established under laboratory conditions. Accuracy can be achieved using polynomial calibration constants.