



Hydrostatic Profile Gauge Model 5140 - SG - D5HPG

APPLICATIONS

- Road, rail dam embankment settlement and heave measurement
- Oil tank foundation settlement monitoring
- Settlement beneath concrete foundations and structures
- Subsidence monitoring of landfill or tip sites



General

Sisgeo Profiler is an hydrostatic profile gauge designed for settlement or heave monitoring beneath embankments or foundations.

The measuring system consist of a settlement probe equipped with a high-sensitive pressure transducer connected by fluid filled electro-hydraulic cable to a reference tank assembled inside the reel.

On the face panel a LCD display readings directly in mm.

Description

HDPE (high density polyethylene) profile tube is installed horizontally at the monitoring surface. During operation the reel is mounted on a tripod which is installed close to the tube end. Pulling the probe metre by metre through the HDPE tube, the profiler enables to measure the hydrostatic pressure which is directly proportional to the tube elevation.

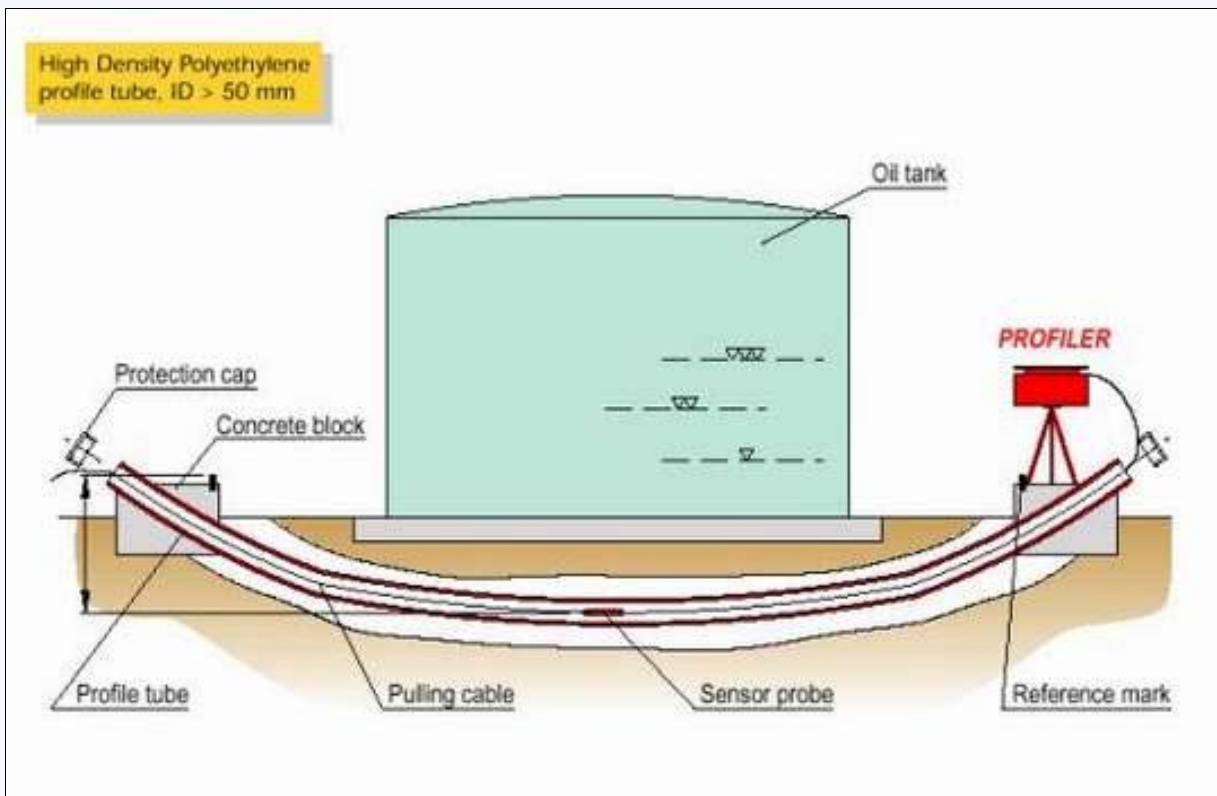
Conductor wires moulded into the wall of the flexible tube transmit the output signal from the sensor to the readout.

Comparison of data measurements taken at different time intervals provides settlement and/or heave monitoring.

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Specifications

Probe		Reel	
Material	Stainless Steel	Material	Fibre glass
Outer Diameter	34 mm	Diameter	690 mm
Length	280 mm	Height	340 mm
Measuring Range	10 m	Tripod	Aluminium
Resolution	1 mm	Total Weight	25 kg with 50 m of tube
Total Accuracy	± 20 mm		
Power Supply	10 V DC		
Output Signal	20 mV ±5%		
Time Lag	3—10 sec		
Temp. Operating Range	-10°C to +60°C		
Zero Thermal Shift			
Thermal Sensitivity Shift	< 0.01% of F.S. / °C < 0.01% of F.S. / °C		
Electro hydraulic cable		Readout	
Maximum length	150 metre	Resolution	0.005% F.S.
Tube	nylon 8 x 6 mm	Reading Accuracy	± 1 digit
Marks	every metre	Total temperature drift	< 30 ppm / °C
Hydraulic fluid	de-aired glycerine water mix	A/D converter	14 bits + sign
Electrical cable	6 x 0.22 mm	Input Impedance	> 10 ohms
		LCD	4.5 digits
		Zero Offset	External adjustable
		Power Supply	Rechargeable Battery 12V DC
		Operating Time	> 15 hours
		Temperature Range	-10°C to +50°C



A trench, (0.5—1 m deep and 0.3—0.5 m wide) is excavated along the profile to be monitored. The bottom of the trench is covered with a 150—300 mm thick layer of thin sand levelled and compacted. The tube is laid on the sand layer and covered with further layers of compacted sand. Inside the tube a draw steel cable shell is left to pull the probe through the tube during measurements. At least one of the profile tube end must be accessible, although accessibility at both ends is advisable. A concrete block(s) fixing the end(s) of the tube is equipped with a bench mark providing absolute reference by topographic survey.

Due to on-going design improvements and reviews, we reserve the right to amend product and specifications without prior notice



FOR FURTHER INFORMATION

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