

PSI

Parallel Seismic Instrument

PSI uses the well-known Parallel Seismic method to establish the length of existing foundations (specifically for a pile or deep foundations) where the superstructure (i.e. existing building) precludes access to the pile heads. It is sometimes the only pile integrity test that can be performed.

- For making reuse of old piles.
- Easy to run test.
- Measures only the pile length under a structure.
- Standard compliant with
 - AFNOR NF P94-160-3
 - ASTM D8381-21



Applications

The test requires the installation of a plastic access tube in parallel and as close as possible to the tested pile. The tube should be carried down to a depth exceeding the assumed pile length by a margin of 8-10 meters and filled with water. In unsaturated soil the tube should be firmly grouted in the hole to achieve good coupling with the surrounding soil.

Easy to Operate Inclination test for Borehole and Pile Foundations, Diaphragm and Secant Walls



Reliable

- Specially designed and tested for a hostile construction environment.
- 3-year warranty!
- 10 years free software
- Rugged connectors, cables & sensors



Easy to Use

- Easy to use: It is usually self-taught in less than a day. No additional expensive training is needed.
- Interpretation assistance by Second Opinion Services (SOS) is included.



Top Performance

- Highly sensitive acoustic sensors
- Check any pile length up to 50m in less than 20 minutes.
- Test all types of deep pile foundations.
- Weighs under 10Kg

PSI – Technical Specification

Physical	Housing	Sensor: Rugged metal case Instrument: Rugged, Environment-proof
	Dimensions	210W x 140L x 40H (instrument only)
	Weight	6.0 kg (instrument with 50m cable)
		0.8 kg (instrument only)
		13.0kg (Typical shipping)
	Temperature range	Operating: -25°C to 50° Storage: -40°C to 70°C
	Humidity	90% (non-condensing)
Waterproof	Sensor: IP67, Protection against complete submersion Instrument: IP62, 90% condensation (light rain)	
Power	Internal	USB cable, from computing device
Standards	ASTM D8232-18	Meets or exceeds
	AFNOR NF P94-160-3	
Technical	Hydrophone	100Hz ~ 4kHz in stainless enclosure. 25 mm diameter
	Cables	Heavy-duty polyurethane on reel.
	Sample rate	50kHz (20µS resolution)
	Resolution	16bit A/D + 14 gain levels = 30bit dynamic range .
	Depth accuracy	3mm resolution <0.1% error.
Performance	Pile length	1m-50m
	Productivity	10-15 min (depending on pile length) per pile
	Memory Storage	Unlimited
Output	Reporting	Arrival time vs. depth
		Pile tip depth
Wave speed in the pile		
Language	Multi-lingual report generation in MS Word format	
Requirements	Computer (Minimum)	Windows Win7/Win10/Win11.
		Screen resolution 1280 x 1024 min.



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