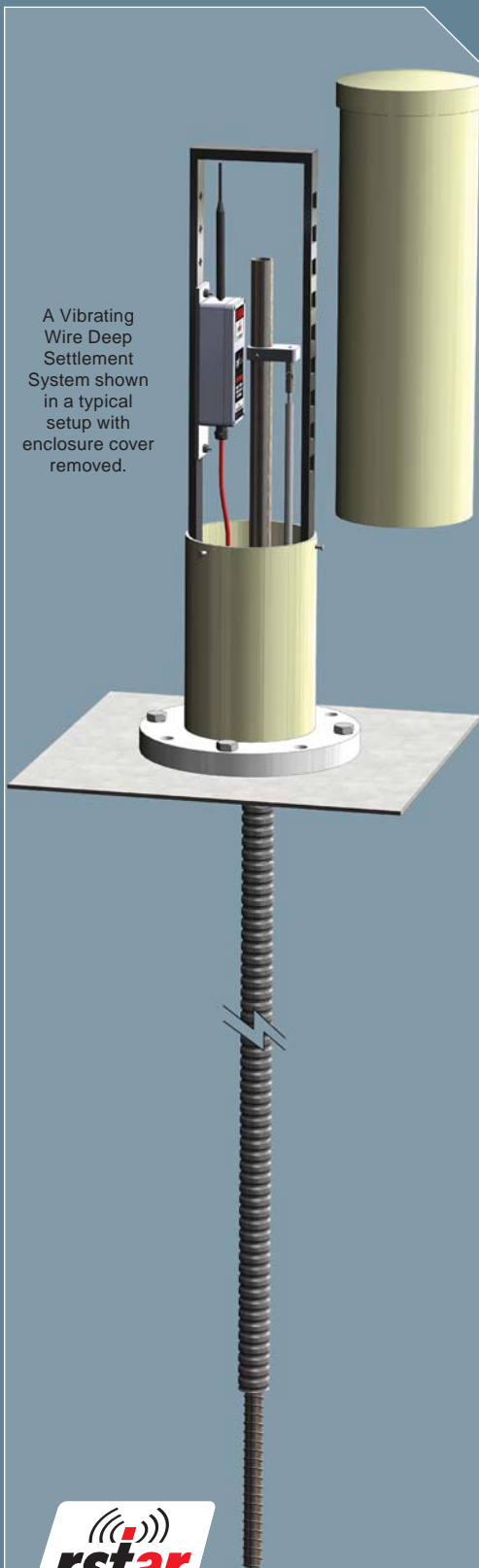




Vibrating Wire Deep Settlement System



A Vibrating Wire Deep Settlement System shown in a typical setup with enclosure cover removed.



Mounted within the system enclosure, a DT2011B can also be equipped with a radio antenna (as shown) and be incorporated into an RSTAR Wireless System. RST's RSTAR System uses wireless technology to provide continuous data acquisition.

The Vibrating Wire Deep Settlement System is used to determine the stability and movement behaviour of soil, rock and concrete. The system is specifically designed to measure surface settlement relative to datum up to 100 m depths.

The Vibrating Wire Deep Settlement System utilizes a DT2011B Single Channel Vibrating Wire Data Logger which measures displacement (up to 150 mm) from the displacement sensor. The displacement sensor detects movement of the central riser pipe which is typically 1" (25 mm) in diameter and is anchored into the borehole in stable ground. The pipe is surrounded by full-length corrugated tubing down to the anchor zone. After installation, all subsequent movement of the riser pipe is logged by the DT2011B; its setup and data collection is done using the Ultra-Rugged Field PC² or a laptop. Multi-Channel Host Software is also included.

After anticipated movement of the riser pipe is achieved, the newly protruding portion of the riser pipe, now visible due to settlement, can be cut off and re-adjusted to the displacement sensor for additional readings of future settlement.

As an option, this system can be easily incorporated into RST's 'RSTAR' Array Radio Series. The DT2011B Single Channel Vibrating Wire Data Logger can transmit data wirelessly to the user's workstation through the attachment of an antenna - as shown in the photos. The RSTAR option is suited for installations of numerous settlement systems.

The complete system is securely housed within an 8" Pedestal PVC Enclosure and sits upon a galvanized steel settlement plate.

specifications

ITEM	DESCRIPTION
Sensor Ranges	25, 50, 75, 100, 150 mm
Accuracy	+/- 0.25 % FSR
Resolution	0.02% FSR
Linearity	0.25% FSR
Operating Temperature	-20°C to 80 °C
Riser Pipe	1" (25 mm)
Corrugated Tubing	1.25" (32 mm)
Data Logger	DT2011B - Single Channel Vibrating Wire (with option for 'RSTAR')
Enclosure (System)	8" x 41" Pedestal - PVC (203 x 1040 mm)
Settlement Plate	Galvanized Steel



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applications

Monitor settlement and heave of ground surface in soft soils with reference to a stable anchoring point at depths up to 100 m.

Ground movements around structures.

Deformations of foundations.

Ground movement behind retaining walls, sheet piling, slurry walls, etc.

Deformation of concrete piles (tell-tales).

features

Continuous range adjustments can be made by cutting off the excess riser pipe after anticipated settlement.

Suitable for remote reading and data logging.

Deep settlement systems up to 100 m.

Simple retrofit for automating readings of traditional tell-tale type deep settlement systems.

ordering info

RANGES	PART #
25 mm	SS2025
50 mm	SS2050
75 mm	SS2075
100 mm	SS2100
150 mm	SS2150

READOUT	PART #
Ultra-Rugged Field PC ²	IC32000-AR2-RSTS

*OPTIONAL

1" (25 mm) Riser Pipe

Corrugated Tubing

RSTAR L900 Array Radio Series
- see separate brochure

*Contact RST for complete details regarding options used for installation.