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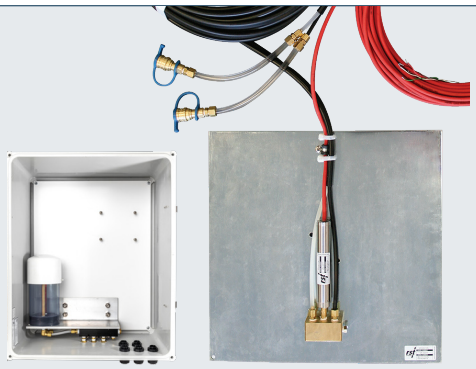
ISO 9001

PRODUCT CATEGORY:
SETTLEMENT SYSTEMS

Vibrating Wire Liquid Settlement System

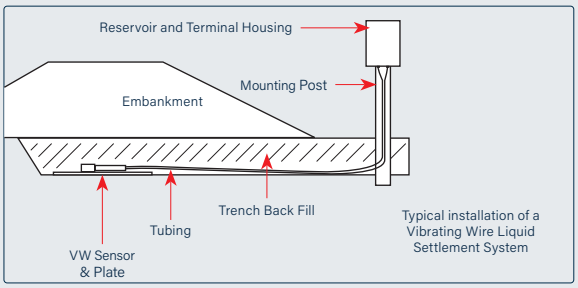
The RST Vibrating Wire Liquid Settlement System SSVW105 monitors settlement or heave in soils and different types of man-made structures such as embankments, and earth and rockfill dams. The system consists of a fluid body, reservoir, flexible tubing, and sensor and readout unit.

A vibrating wire pressure sensor is attached to a settlement plate located at the point to be monitored, and connected via two liquid-filled tubes extending laterally to a reservoir located on stable ground. The sensor measures the hydraulic head of liquid between the sensor and reservoir locations. The liquid filled tubes can also be flushed.



Vented Reservoir inside Reservoir Enclosure with room for DT2055B or RSTAR Affinity Logger

Typical Vibrating Wire Liquid Settlement System shown with the vibrating wire sensor fixed to the settlement plate (cover not shown). An enclosure box at left houses the reservoir.



The optional portable D Aerator SS6000 Liquid Settlement System De-Airing Unit is designed for quick and simple field deployment and is housed in its own rugged carrying case. It quickly and efficiently returns a Liquid Settlement System to its original de-aired condition.

Once the instrument is installed on the job site, the reservoir is opened to the atmosphere and will begin to absorb gases which will eventually form gas bubbles in the hydraulic lines. These entrained gas bubbles will influence the transmission of line pressures and result in instrument reading inaccuracies.

To address this issue, the RST D Aerator SS6000 Liquid Settlement System De-Airing Unit has been designed to complete a full exchange and de-airing of the water/glycol mixture in an entire Liquid Settlement System in just a few hours, essentially returning the system to its original de-aired state.

D AERATOR SPECIFICATIONS

DESCRIPTION	SPECIFICATION
Power	12 VDC rechargeable battery. 100-240 VAC to 12 VDC charging system with extension cord.
Dimensions	50 D x 40 W x 19 H cm (19.68 W x 15.74 D x 7.48 H in.)
Weight	12 kg

> APPLICATIONS

- Preload consolidation monitoring.
- Embankment construction control.
- Subsidence monitoring.
- Monitor settlement or heave.

> FEATURES

- Tubes ship pre-filled with water/glycol.
- Pre-tested and calibrated.

> BENEFITS

- ✓ Increase Safety
- ✓ High Accuracy
- ✓ High Reliability

ORDERING CONSIDERATIONS

Range of pressure transducer on cells (Based on the expected settlements and vertical distance between cells and reservoirs)
Cable and tubing lengths for each individual cells
Number of cells for each reservoir (RST recommends using an additional cell per reservoir to act as a reference cell)
Enclosure type to house reservoirs and loggers as an option

SPECIFICATIONS

ITEM	SPECIFICATION
Standard Ranges	7, 17, 35 m
Resolution/ Repeatability	0.025% FS
Sensor Accuracy *System accuracy specification dependent on site conditions*	0.1% FS
Temperature Range	-20°C to +80°C

ORDERING

ITEM	PART #
Vibrating Wire Liquid Settlement System 70 kpa	SSVW105
Vibrating Wire Liquid Settlement System 170 kpa	SSVW105-170
Vibrating Wire Liquid Settlement System 350 kpa	SSVW105-350
Liquid settlement system vented reservoir	SSSP105RV-1. The last number will indicate how many cells required (cell range 1 to 12).
Enclosure to house Liquid Settlement vented reservoir (Reservoir not included)	SSSP105RV-ENC-### (For best configuration options contact RST)
Settlement Plate with Cover	SSSP105P-C
Cable	EL380004
2x1/4" PE Tubing PVC Jacket Water/Glycol	SS003000
Custom enclosure for reservoir and optional data logger	SSP105RV-ENC
De-Aired 60/40 Glycol/ Water Mixture - 1L bottle	SSSP106M
OPTIONAL	
D Aerator SS6000 - Liquid Settlement System De-airing Unit	SS6000
Tubing Splice Kit NOTE: Must de-air system after splicing.	PP0175