Magnetic Settlement System

Description

RST Instruments Magnetic Settlement Systems are available in 3 main configurations which monitor either heave or settlement in soil and rock.

MAGNETIC SETTLEMENT SYSTEM WITH FLUSH THREADED PVC PIPE:
Installation as a single purpose device to monitor settlement/heave only.

MAGNETIC SETTLEMENT SYSTEM WITH INCLINOMETER CASING:
Installed in conjunction with RST Flush-coupled Inclinometer Casing to obtain both vertical and horizontal deformation data from a single installation. If larger amounts of settlement/heave are anticipated, this configuration may also incorporate a Corrugated Sleeving with Settlement Magnetic Rings which will accommodate RSTâ??s Inclinometer Casing of 70 mm (2.75â?•) and 85 mm (3.34â?•) OD sizes.

MAGNETIC SETTLEMENT SYSTEM WITH 1.5â?• CORRUGATED PIPE:
A more inclusive system which contains pre-installed magnets along a 1.5â?• ID corrugated pipe. This corrugated configuration is also more ideal for situations where larger amounts of settlement/heave are anticipated.

All 3 configurations listed below use an RST Reed Switch Probe to provide a reading in the magnetic zones allocated along the length of the borehole. Installations are typically vertical, however, horizontal applications may be accommodated utilizing installation rods to insert the probe.All are designed to be simple, accurate, and provide long-term reliability at a low cost.

MAGNET SPECIFICATIONS

For use with PVC pipe or inclinometer casing.

DATUM MAGNETS	SPECIFICATION
SSRS00D1	To fit 1 in. flush threaded PVC pipe. Max OD 5.95cm (2.4 in.).
SSRS00D2	To fit RST 70 mm (2.75 in.) Glue & Snap or Snap Seal inclinometer casing.
SSRS00D4	To fit RST 85 mm (3.34 in.) Glue & Snap or Snap Seal inclinometer casing.

SPIDER MAGNETS	SPECIFICATION
SSMM100	Mechanical release spider target for 1â?• PVC pipe.
SSMM275	To fit RST 70 mm (2.75 in.) Glue & Snap or Snap Seal inclinometer casing. Max OD 9.92cm (4.0 in.). Borehole size as required.

SSMM334	To fit RST 85 mm (3.34 in.) Glue & Snap or Snap Seal inclinometer casing. Max OD 11.16 cm (4.5 in.). Borehole size as required.

PLATE MAGNETS	SPECIFICATION
SSRS00P1	To fit 1 in. flush threaded PVC pipe. Dimensions: 30 x 30 cm (12 x 12 in.)
SSRS00P2	To fit RST 70 mm (2.75 in.) Glue & Snap or Snap Seal inclinometer casing. Dimensions: 30 x 30 cm (12 x 12 in.)
SSRS00P3	To fit RST 85 mm (3.34 in.) Standard or Snap Seal inclinometer casing. Dimensions: 30 x 30 cm (12 x 12 in.)

INCLINOMETER CASING: TELESCOPIC SECTION MAGNETS	SPECIFICATION
ICGC2TS01	To fit RST 70 mm (2.75 in.) Glue & Snap casing. Max OD 7.25 cm (2.85 in.)
ICSC2TS01	To fit RST 70 mm (2.75 in.) Snap Seal casing. Max OD 7.25 cm (2.85 in.)
ICGC3TS01	To fit RST 85 mm (3.34 in.) Glue & Snap casing. Max OD 8.89 cm (3.50 in.)
ICSC3TS01	To fit RST 85 mm (3.34 in.) Snap Seal casing. Max OD 8.89 cm (3.50 in.)

MAGNET + ACCESS PIPES SPECIFICATIONS

For use with 1.5 inch corrugated pipe settlement system.

MAGNETS	SPECIFICATION
SS3210	Anchor Assembly (includes Datum Target)
SS3220	Magnetic Target Assembmblyly
SSRS00P2	Plate Magnet: 30 x 30 cm (12 x 12 x 12 i2 in.)

SLEEVING AND ACCESS PIPES	SPECIFICATION
SS3201	Corrugated pipe/sleeving 38.1 mm (1.5 in) ID
EPA100805	25 mm (1.0 in.) PVC Access Pipe x 5 ft.
EPA100810	25 mm (1.0 in.) PVC Access Pipe x 10 ft.

ACCESS PIPES SPECIFICATIONS

For use with PVC pipe or inclinometer casing.

ITEM	SPECIFICATION

EPA100805	25 mm (1 in.) PVC X 5 ft.
EPA100810	25 mm (1 in.) PVC X 10 ft.
SSTS100	1â?• Telescopic Section - 10â?? to 7â?? (3m to 2m) (43mm OD)
ICGC210	2.75 in. Glue & Snap casing X 10 ft.
ICGC205	2.75 in. Glue & Snap casing X 5 ft.
ICTC205	70 mm (2.75 in.) Standard telescopic casing section
ICSC305	3.34 in. Snap Seal casing X 10 ft.
ICSC310	3.34 in. Snap Seal casing X 5 ft.
ICTC310	85 mm (3.34 in.) Snap Seal telescopic casing section
SS3001	Corrugated sleeving 76.2 mm (3.0 in) ID

READOUT SPECIFICATIONS

ITEM	SPECIFICATION
Resolution	1 mm / 0.01 ft.
Tape	Polyethylene coated (TeflonÂ® coated optional) 10mm (0.4 in.) flat style. Stainless-steel conductors.
Probe	Two reed switches standard. 16 X 200 mm (5/8 in. OD X 8 in. long)
Reed switch precision	Â±0.03 to 0.3 mm (Â±0.001 to 0.01 in.)
System precision	Vertical installations typically Â±3 to 5 mm (Â±0.1 to 0.2 in.). Vertical installations with micrometer head typically Â±0.5mm (Â±0.02 in.).
Battery	Standard 9 V

SPECIFICATIONS