



Glue and
Snap
Inclinometer
Casing



Snap Seal Inclinometer Casing
(showing internal "O-ring")



Standard
Bottom
Cap

Bottom Cap with
Grout Valve

	PRODUCT CATEGORY:
	INCLINOMETERS + TILT SENSORS

Inclinometer Casing

RST's Inclinometer Casing is engineered to be assembled quickly and accurately for long and short term monitoring in the most adverse field conditions. It is suited to be installed in boreholes, embankments, piles, set into concrete or attached to structures.

The casing serves as an access tube to guide a MEMS-based inclinometer probe in the two orthogonal directions of measurement. Changes in the output of the probe caused by the deformation of the casing, is proportional to the sine of the angle of inclination of the long sensor axis from vertical. These displacements are incrementally summed to provide profiles of total displacement versus depth.

Key to quality inclinometer casing is not only the material, but the quality and shape of the grooves. The inclinometer probe utilizes grooves in the casing to control the azimuth of the inclinometer probe.

RST casing is manufactured from non-recycled virgin ABS resin. While more costly than common PVC resin, ABS is preferred due to superior flexibility, stability and low temperature impact resistance. Using recycled resin degrades the performance of casing. All RST casing is machined to insure the highest quality possible.

> THIS PRODUCT

Provides alignment and displacement measurements in numerous applications.

Is available in either "Snap Seal" or "Glue & Snap" coupling styles.

> APPLICATIONS

Pilings.	Landslides and slope stability.
Subsidence control.	Under large storage tanks.
Embankment and dam stability.	Bridge pier, abutments deflection.

Areas next to large excavations.

> FEATURES

High precision, machined guide grooves.	Low spiral ≤ 0.005 Rad/3 m (≤ 0.3 deg./10 ft.)
Meets or exceeds all applicable standards.	Easy assembly.
Self-aligning, water and grout tight couplings.	70 mm (2.75 in.) and 85 mm (3.34 in.) OD sizes.

Compatible with all commercial probe types and in-place inclinometer sensors.

Integral coupling reduces assembly induced spiral by 50% over conventional separate coupling methods.

Compatible with inductance, reed switch, magnetic, or mechanical settlement monitoring devices.

Snap Seal and Glue & Snap integral flush couplings that minimize field installation time.

Low temperature, impact, and corrosion resistant ABS plastic.

External key provides visual and tactile confirmation of proper installation.

> BENEFITS

✓ Increase Safety	✓ High Accuracy
✓ Increase Productivity	✓ Upgradable
✓ High Reliability	



Available for
IMMEDIATE DELIVERY
Info on reverse.

Inclinometer Casing

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SPECIFICATIONS + ORDERING

CASING SPECS		
DESCRIPTION	70 MM (2.75 IN.) OD	85 MM (3.34 IN.) OD
Casing OD (including coupling)	70 mm (2.75 in.)	85 mm (3.34 in.)
Casing ID	59 mm (2.32 in.)	73 mm (2.87 in.)
Casing Length	5 or 10 ft. (1.5 or 3 m)	5 or 10 ft. (1.5 or 3 m)
Casing Weight	1.27 kg/m (.85 lbs/ft.)	1.49 kg/m (1.0 lbs/ft.)
Material	ABS Plastic	
Groove Spiral	≤ 0.3 deg./10 ft.	
GLUE & SNAP SPECIFICATIONS - 70 MM		
Load Test	738 kg (1630 lbs.)	
Collapse Test	17.2 bar (250 psi)	

TELESCOPIC SECTION SPECS		
DESCRIPTION	70 MM (2.75 IN.) CASING	85 MM (3.34 IN.) CASING
Telescopic Section OD	76.96 mm (3.03 in.)	91.44 mm (3.6 in.)
Compressed Length	457 mm (18 in.)	457 mm (18 in.)
Extended Length	609 mm (24 in.)	609 mm (24 in.)
Range	152 mm (6 in.)	152 mm (6 in.)
Weight	0.77 kg (1.7 lbs.)	0.9 kg (2 lbs.)

SNAP SEAL CASING

Snap Seal is the original O-ring sealed coupling system, which does not require glue, pop rivets, screws, or shear wires. This patented, innovative system allows casing sections to lock together while maintaining precise groove alignment and high collapse strength. The Snap Seal system is flush coupled for ease of installation in hollow stem augers and casing advancers.

GLUE + SNAP CASING

Glue & Snap provides the speed and convenience of a snap-together flush coupling combined with the low cost and high tensile/high torsional strength of a glue joint. Installation is simply done by applying a bead of glue to the male end, snap casing together and insert down hole.

ORDERING

DESCRIPTION	GLUE & SNAP		SNAP SEAL	
	70 MM (2.75 IN.)	85 MM (3.34 IN.)	70 MM (2.75 IN.)	85 MM (3.34 IN.)
1.52 m length (5 ft.)	ICGC205	ICGC305	ICSC205	ICSC305
1.50 m length (4.92 ft.)	ICGC205M	ICGC305M	ICSC205M	ICSC305M
3.05 m length (10 ft.)	ICGC210	ICGC310	ICSC210	ICSC310
3 m length (9.84 ft.)	ICGC210M	ICGC310M	ICSC210M	ICSC310M
Top Cap	ICC2TC	ICC3TC	ICC2TC	ICC3TC
Bottom Cap	ICGC2BC	ICGC3BC	ICSC2BC	ICSC3BC
Casing Anchor	ICGC2CA	ICGC3CA	ICSC2CA	ICSC3CA
Casing Anchor with Grout Cap	ICGC2CG	ICGC3CG	ICSC2CG	ICSC3CG
Grout Cap	ICGC2CP	ICGC3CP	ICSC2CP	ICSC3CP
Repair Coupling	ICGC2RC	ICGC3RC	ICSC2RC	ICSC3RC
Alignment Tool for Coupling	IC1002	IC1003	IC1002	IC1003
ABS Solvent Cement (1/2 pint) (NOTE: cannot be air shipped)	IC1020			
Female Grout Adapter 3/4" NPT	IC1200			
Telescopic Section	ICGC2TS	ICGC3TS	ICSC2TS	ICSC3TS

Available for
**IMMEDIATE
DELIVERY**

Contact RST for Details

Below: A top view of an Inclinometer Casing Anchor with its arms fully extended. Both Snap Seal (shown) and Glue & Snap coupling styles are available.

INCLINOMETER CASING ANCHOR

The Inclinometer Casing Anchor prevents buoyant uplift of inclinometer casing during installation. It is affixed to the bottom of the inclinometer casing prior to inserting it into the drill-rod/borehole. As soon as the anchor exits the bottom opening of the drill-rod/borehole, the spring loaded arms of the anchor are automatically extended to grip the borehole wall.

TELESCOPIC SECTION

When vertical heave or settlement is anticipated to exceed 1-2%, Inclinometer Casing Telescoping Sections must be used to allow axial movement of the casing while minimizing distortion due to vertical strain. Telescopic sections must be inserted appropriately extended or collapsed to accommodate the expected settlement/rebound. Settlement sections are available in 70 mm (2.75 in.) and 85 mm (3.34 in.) and each section can accommodate up to 150 mm (6 in.) of compression or heave.