

Inclinometer Casing

Description

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 ensure the highest quality possible.

Inclinometer Casing Specifications

| ITEM | 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 | ABS Plastic |
| Groove Spiral | ? 0.3 deg./10 ft. | ? 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 SPECIFICATIONS

| ITEM | 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.) |

Specifications