

## GT-INCC Inclinometer Casing

Inclinometer casing is a special tube that used in conjunction with inclinometer probe and characterized by cross shaped groove section along its length. It provides an easy and smooth access for inclinometer probe during subsurface data collection. Inclinometer casing is generally installed in boreholes, however it can also be directly cast inside concrete, embedded in fills or attached to structures. Typically, Inclinometer casing needs to be vertically installed at the center of the borehole.

Inclinometer casing is manufactured using ABS plastic which is capable of retains its shape over a high temperature. It is also easy to assemble and seal during the installation. Finally, it can sustain the ground displacement over long period of time and also suitable for long term contact with groundwater, grout and any types of soil. Because of its advantages, ABS casing is more preferable than PVC, fiberglass, or steel casing.

Casing grooves are precisely designed and manufactured with an excellent quality control of width, chamfer, depth, straightness and spiral. These criteria are very critical that can directly affect the accuracy of inclinometer probe. The groove holds the wheels of inclinometer probe tightly such as the probe can smoothly move up and down along its track without derailing

While measuring deflections inside borehole, Inclinometer probe is drawn from the bottom to the top of the casing and record is taken every interval of 0.5 or 1 meter. During the recording, sufficient time is needed for the probe to achieve stable readings which is determined by observing the readings on readout box.

## Assembly

Inclinometer casing is designed with a standard length of 3 meters. Coupling section is used to connect together each section of Inclinometer casing such as they can stretch along borehole depth. In installation, joint connection between Inclinometer casing and joint section should be properly assembled by using ABS cement, blind rivets and also bound together with tape. In case if the connection is not adequately sealed, grout could seep through the casing and could prevent inclinometer probe from reaching measurement depth.



### Casing Specifications

Inner groove type Casing	Outer groove type Casing
Coupling OD: 70 mm, 2.75 inches.	Coupling OD: 78 mm, 3.07 inches.
Casing OD: 70 mm, 2.75 inches.	Casing OD: 70 mm, 2.75 inches.
Casing ID: 59 mm, 2.32 inches.	Casing ID: 60 mm, 2.32 inches.
Collapse Rating: 15 bar, 220 psi.	Collapse Rating: 15 bar, 220 psi.
Load Rating: 320 kg, 700 lb.	Load Rating: 320 kg, 700 lb.
Temp rating: -20 to 80 °C.	Temp rating: -20 to 80 °C
Spiral: $\leq 0.33^\circ$ per 3 m or 10' section.	Spiral: $\leq 0.5^\circ$ per 3m or 10' section.