







#### Overview





Geosense® QJ Inclinometer Casing is a quick connecting casing, precision extruded from ABS, with four precise keyways formed at 90 degrees which allow accurate installation of portable and in-place inclinometers.

The quick connecting joint makes it faster and easier to install than traditional glue & socket inclinometer casing with external couplers and does not require any special tools or tapes. On deep installations the time saving is very significant.

It can be used in boreholes, fill material, cast into concrete or attached to structures and is designed to move with the ground, material or structure to provide inclination information over a period of time.

As the casing is designed to deform with movement of the ground or structure the useful life of the casing ends when the continued movement of the casing causes deformation of shear so that the inclinometer probe can no longer be placed into the casing. Larger casing generally ensures a longer life.

Where vertical settlement or heave is anticipated to be greater than 2% it is recommended to use telescopic sections to eliminate axial load on the casing which would cause excessive buckling.

A full range of accessories including bottom and top caps, anchors and groutable anchors are available and can be used in conjunction with magnetic targets for combined inclinometer/magnetic extensometers.

#### **APPLICATIONS**

For use with inclinometer systems for monitoring stability & movement of:

Slopes

**Embankments** 

Diaphragm & sheet piled walls

Deep foundations

**Tunnelling operations** 

Piles

Pre-loads

Deep excavations

#### **FEATURES**

Low spiral

Fast installation

No rivets, tape or glue

Minimises standing time

Flush connection

Available in 3 & 1.5 metre lengths

Made from 100% virgin ABS plastic

Simple to install & use

Fully compatible with all probe types

70mm diameter

Telescopic sections available

Can be combined with magnetic targets

# Specifications

#### **CASING SPECIFICATIONS**

| Material            | 100% virgin ABS (Acrylonitrile-butadiene-styrene) |
|---------------------|---|
| Groove spiral       | < 0.3°/3m   |
| Collapse resistance | ~ 2000kPa   |
| Joint strength      | 186 Kgf   |
| Torque              | 26Nm  |
| Bend rating         | 2.6kN   |
| Maximum temperature | +80°C   |
| Colour              | Orange (other available on request)               |
| CASING DIMENSIONS   |   |
| Outside diameter    | 70mm  |
| Inside diameter     | 59mm  |
| Length (effective)  | 1.5 & 3 metre                                     |
| TELESCOPIC SECTION  |   |
| Outside diameter    | 83mm  |
| Inside diameter     | 59mm  |
| Telescopic range    | 150mm   |
| Length              | 500mm   |
| WEIGHTS             |   |
| Casing              | 1.27kg/m  |
| Telescopic section  | 1.6kg   |
| Тор сар             | 20g   |
| Bottom plug         | 168g  |
| ACCESSORIES         |   |
| Standard Anchor     | 70mm  |
| Grout Anchor        | 70mm  |
| Grout Cap           | 70mm  |

## **Casing Accessories**









#### **ACCESSORIES**

Casing Accessories include, above from left, Reed Switch Probe Centraliser & Tape Guide, Top & Bottom Caps and Suspension Clamps. Also available: Repair Coupling & Alignment Tool.



#### **ANCHORS**

Inclinometer Casing Anchors are fixed to the bottom of the casing prior to installation to prevent uplift, usually due to buoyancy forces of water or grout. 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.

A Grouting version of the anchor is available and Magnetic Targets can also be integrated.

#### ORDERING INFORMATION

| Diameter            |
|---------------------|
| Length              |
| Telescopic sections |
| Bottom cap          |
| Тор сар             |
| Anchor type         |





Geosense Ltd, Nova House, Rougham Industrial Estate, Rougham, Bury St Edmunds, Suffolk IP30 9ND, England

www.geosense.co.uk e sales@geosense.co.uk t +44(0)1359 270457

Specifications may change without prior notice

V1.7 09/2020