

DH-TUBE Downhole Tube for VE/AC-xx-DH Sensors

Features

- ❑ Aluminum Tube Casing to utilize for downhole applications
- ❑ 3 m long sections for boreholes of $\varnothing > 100$ mm
- ❑ Special grooved cross-section in compliance with wheeled sensor probe system



Outline



Aluminium inclinometer casing (tube) is a special grooved tubing, generally installed within a drilled hole, used in conjunction with a wheeled sensor probe system to determine sub-surface ground dynamic movements. It's internal grooves provide an orientation reference for the inclinometer probe readings. During manufacturing particular attention is paid to minimise the twisting of the casing grooves.

The casing is supplied in sections of 3 meters long and a coupling element is used to assemble the whole casing at installation time.

The assembly is done using "pop" rivets and each coupling is sealed with tape. At the bottom of the tube, a cover is mounted to seal the tube. Sealing is needed for the time until the sensor is placed into the casing. After complete casing insertion, it must be settled in the hole using a light concrete mixture. Then the sensor can be inserted and fixed in position after it has been tested for some time.

The sensor is guided by a set of wheels mounted below it (see figure on the left). The wheels are guided by the grooves inside the inclinometer casing all along its length. Before inserting into the casing, the sensor orientation should be adjusted relative to the casing.

The casing is inserted section by section in a drilled hole with a settled PVC tube of at least 100 mm inner diameter.

Specifications DH-TUBE

INCLINOMETRIC CASING (3 m long section)

A	Inner diameter	76.1 mm
B	Groove outer diameter	86.4 mm
C	Thickness	2.2 ±0.1 mm
D	Groove inner diameter	82.0 mm
	Weight	1.4 Kg/m
	Borehole diameter	> 100 mm

COUPLING ELEMENT

A	Inner diameter	81.0 mm
B	Outer diameter	92.0 mm
C	Thickness	2.2 mm
D	Groove inner diameter	87.6 mm
	Length	300 mm
	Weight	0.5 kg

