

C-20 HORIZONTAL DIGITAL INCLINOMETER SYSTEM



Description

The Horizontal Digital Inclinometer System is used to measure profiles of settlement and/or heave within a horizontal borehole. The system comprises a uniaxial probe, cable reel and a rugged field table supplied with 'In-Port' data capture software.

The probe incorporates MEMS technology allowing highly accurate and repeatable readings, transferred via a digital signal. Bluetooth communication enables cable free data transmitting.

The Kevlar cable consists of a cable marker system which, when used in conjunction with the cable gate, provides highly accurate and repeatable depth control.

With all these combined features, the Horizontal Digital Inclinometer System is a robust and highly accurate system that is light, compact and easy to operate in any site environment.

Features

- Probe is manufactured from 316 Stainless Steel Precision sprung wheel assemblies
- Bluetooth connection between cable reel & field tablet
- Accurate and precise measurements using MEMS sensors
- Repeatable control using metal markers and cable gate system
- Field tablet allows easy interface with most office systems and applications
- Enhanced 'In-Port' software to use with Field PC for easy data capture

Benefits

- Horizontal inclinometers provide complete profiles of differential settlements, compared to measuring discrete settlement cells.
- Digital signal allows interference-free data transmission
- Advanced electronics ensure long, trouble free use in a site environment
- Bluetooth reel provides 40 hours of operation on one charge
- Lightweight and easily portable



Comprehensive information about this product and our full range is available at soilinstruments.com
If you would like to speak with someone directly please call +44 (0)1825 765044 or email sales@soilinstruments.com

PRECISELY MEASURED
instrumentation and monitoring



Microelectromechanical Systems, or MEMS, is a technology that uses miniaturised mechanical and electromechanical elements that are made using the techniques of microfabrication. The physical dimensions of MEMS devices can vary from well below one micron all the way to several millimetres.

Our MEMS microsensor is a small discrete device that converts a measured mechanical signal, gravity (g) into a voltage signal.

Operation

The inclinometer probe is inserted into the inclinometer casing, ensuring the probe wheels are correctly aligned and slotted within the keyways of the casing. The probe is connected by a graduated cable to the cable reel.

Displacement readings are taken at regular intervals of 0.5m within the casing (the gauge length between the probe wheels). This is measured and controlled by metal markers crimped around the cable that pass through a notch in the cable gate, giving an exact position for each reading.

When you take all subsequent readings at identical depths the comparison of successive casing profiles indicates the depth, direction, magnitude and the rate of change of movement.

You can see the clearest indication of movement by plotting the change in displacement of the casing against depth using 'In-Profile' Inclinometer Data Management Package.

Applications

Horizontal Inclinometer Systems can be used to provide settlement profiles and monitoring of heave.

Typical applications include:

- **Embankments**
- **Dams**
- **Structures**
- **Landfill**
- **Storage Tanks**



Associated products

For details on:

Catalogue code:

EC Casing

C9

Standard Casing

C18

'In-Profile' Software

C13

Inclinometer Test Probe

C10

View our full product range on www.soilinstruments.com

THE TECHNICAL RATING FOR THIS PRODUCT:

BASIC



As the correct installation of any monitoring sensor or system is vital to maximise performance and accuracy, Soil Instruments makes the following recommendations, for the skill level of the installation contractor.

ADDITIONAL SUPPORT

We offer installation and monitoring services to support this system. For more information please email : sales@soilinstruments.com or call : **+44 (0) 1825 765044**

ADVANCED



The installer is trained and experienced in the installation of this type of instrument or systems, and is ideally a specialist Instrumentation and Monitoring contractor.

INTERMEDIATE

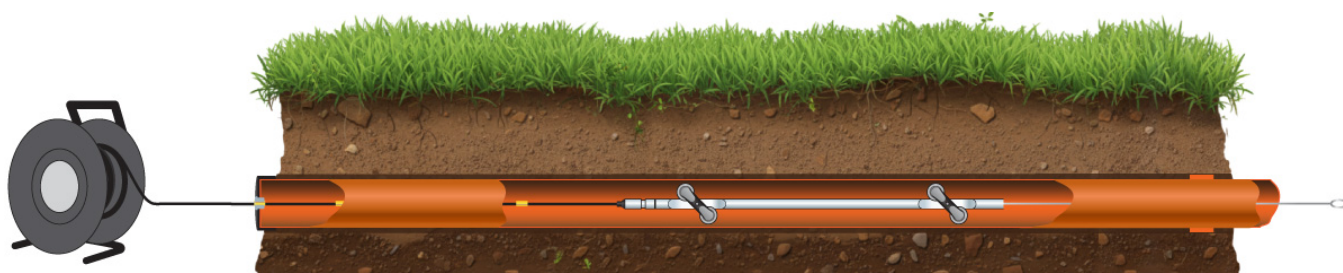


The installer already has previous experience and/or training in the installation of this instrument or system.

BASIC



As a minimum the installer has read and fully comprehends the manual, and if possible has observed these instruments or systems being installed by others.



Specifications

Probe	
Probe gauge length	500mm (metric system) or 24" (imperial system)
Probe diameter	25mm
Calibrated range	±30°
Resolution	0.005mm
Operating temperature	-20 to +70°C
Repeatability	±0.003°
Cable length options	30m 50m 75m 100m 150m
Maximum casing diameter	85mm OD casing

Cable	
Type	Kevlar® re-enforced Polyurethane coated 4 core cable
Cable marker	Brass markers

Cable Reel	
Dimensions	360mm x 360mm x 240mm
Battery life	40 hrs' continuous use

Weight (complete with probe)	
30m	3.5kg
50m	6.5kg
75m	11kg
100m	15Kg
150m	19.5kg

Ordering information

Horizontal Digital Inclinator System

For use with up to 85mm OD casing

C20-1.1	30m cable length
C20-1.2	50m cable length
C20-1.3	75m cable length
C20-1.4	100m cable length

In-Profile Inclinator Data Management Package

C13-1-PRO	In-Profile package with 1 licence key
-----------	---------------------------------------

Inclinator Accessories

C11-2.2	Test Probe with 100m steel cable and cable reel
C10-3.8	Probe reference frame

Single Ended Installation Accessories

C11-2.3	Pulley box; used with draw cord E2-3.6 and profile tubing S17-4.1
S17-4.1	Profile tubing; supplied in 25m, 50m and 100m length reels
S17-4.2	End cap; to fit profile tube S17-4.1
S17-4.3	Profile tube repair coupling; for joining profile tubing S17-4.1 with a 50mm OD
E2-3.6	Pull cord; priced per 100m, 4mm OD

Manuals

MAN-155	Inclinator Reference Frame
MAN-202	Digital Horizontal Inclinator

soil
INSTRUMENTS



Bell Lane, Uckfield, East Sussex
TN22 1QL United Kingdom

t: +44 (0) 1825 765044
w: soilinstruments.com

e: sales@soilinstruments.com