

C9-4 QD (QUICK DRIVE) INCLINOMETER CASING

Datasheet C9-4



Description

QD (Quick Drive) Casing has all the advantages of EC (Easy Connect) Casing, combined with a mild steel nose cone for driving into pre-formed window sampling holes, and may also be used for shallow installations into soft soils.

QD Casing is faster and easier to install than coupled inclinometer casing, as no rivets, tape or glue are required; simply push together and the joint is made.

The casing can be extended or joined at any point along its length and telescoping couplings are available to cope with significant settlement or heave.

QD Casing is manufactured using ABS extrusion techniques, resulting in an accurate groove profile with precise keyways formed at 90° into the internal surface and has been extensively tested to ensure that the machined joint is strong and resists the ingress of water and grout.

Features

- Fitted with mild steel nose cone
- Push fit; faster and easier to install than standard inclinometer casing
- Reliable joints; a machined slot ensures consistent keyway alignment
- Watertight; an 'O'ring on each seal prevents ingress of water or grout
- Low spiral and deep tight groove profile, gives more accurate data
- Joints tested against pull, collapse and twist forces
- Manufactured from virgin ABS

Benefits

- Extremely simple, drive in installation technique
- Requires no rivets, tape or glue
- Savings in installation time significantly reduces labour and drill rig standby charges
- End cone ensures that the casing is securely driven, providing an accurate datum
- Small annulus to backfill



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

Operation

QD Casing is ideal for installation with window sampling equipment in physically restricted areas where access is limited, making it non cost effective or simply impossible to use conventional drilling rigs to install inclinometer casing.

QD Inclinometer Casing comprises a steel cone attached to the end of a two metre section of Easy Connect (EC) Casing.

This is driven into a pre-formed hole, using a window sample rod passed through the casing to push onto the upper surface of the driving cone.

As the lead length is driven in, further one metre sections are added as needed, until the required depth is reached.

Where site conditions permit, it can be pushed to the required depth using Cone Penetration Testing (CPT) equipment.

Applications

Quick Drive (QD) Casing improves the viability of installing inclinometer casing into pre-formed window sampling holes.

These methods remove the need for a drill rig to attend site, saving time, money and significantly speeding up installation.

Typical applications include:

- Highway and railway embankments
- Detecting slopes and landslides
- Determining shear and slip zones
- Verifying design assumptions and finite element analysis
- Long-term monitoring purposes
- Monitoring retaining walls
- For shallow depth in soft soil conditions.



Associated products

For details on:

Catalogue code:

Digital Inclinometer System	C17
'In-Site' Data Presentation Software	C13
Inclinometer Test Probe	C10
In-Place inclinometers	C12

View our full product range on www.soilinstruments.com

THE TECHNICAL RATING FOR THIS PRODUCT:

INTERMEDIATE



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

Casing

Material	ABS (Acrylonitrile Butadiene Styrene)
Groove spiral	< 0.5° / 3m
Collapse rating	1960kPA
Bend rating	252N
Maximum temperature	80°C
Tensile strength	585kgF
Torque	25Nm

2 Metre Drive Section

Effective length	1840mm
Length	2090mm
Outside diameter	70mm
Inside diameter	59mm
Cone diameter	76mm
Cone material	steel
Cone taper angle	40°
Weight	5.7kg

1 Metre Section

Effective length	1m
Length	1.06m
Outside diameter	70mm
Inside diameter	59mm
Weight	1.3kg

Top Cap

Weight	48g
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Lockable Top Cap

Weight	718g
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Ordering Information

Quick Drive Inclinometer Casing - 70mm Outer Diameter

C9-4.1	Inclinometer casing with steel driving cone attached. 70mm outer diameter, 2metre length
C9-4.3	EC casing, 1 metre length. 70mm outer diameter
C9-1.5	Lockable top cap assembly. Includes; 150mm length ABS tube, rivets cap, bar and padlock
C9-1.4	Top cap
C9-3.13	EC Casing tool kit. Includes; 2No clamps to aid connection of 70mm OD EC casing during installation

Inclinometer Head Works

C9-3.6	Security Cover. Includes; 101.6mm diameter, 500mm length steel tube, cap, bar and padlock
C9-3.7	Lockable heavy duty stopcock cover

Manuals

MAN-1	Inclinometer Installation
MAN-171	Bentonite Cement 'Grout Mix' Guide
MAN-196	Quick Drive Quick Install Guide

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INSTRUMENTS



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