# Rod Extensometer

## Model 3401-GS-RE01

## FEATURES

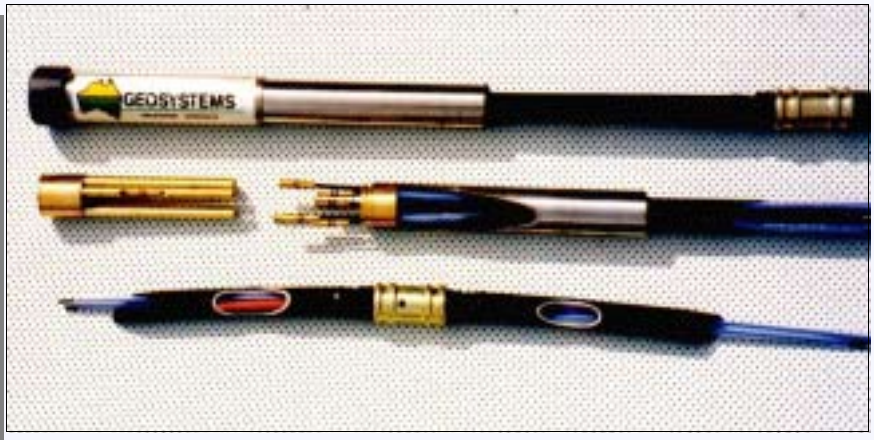
- ***Accuracy at low cost***
- ***Rod length virtually unlimited***
- ***Up to 12 anchors in one assembly***
- ***150 mm travel (300 mm optional)***
- ***Supplied completely assembled***
- ***Design accommodates transverse shear***
- ***Lightweight, coiled for ease of handling***
- ***Groutable, hydraulic and spider anchors***
- ***Multiple remote readout options***

## APPLICATIONS

*Geosystems' range of rod extensometers are simple, reliable instruments for measuring ground displacements in a wide range of applications in:*

- *underground and open-cut mining, and*
- *civil engineering excavations.*

*The compact, lightweight design allows for installation in both upholes and downholes of minimum size.*




## General

*Designed to withstand severe field conditions and to accommodate limited transverse borehole shearing, these extensometers are supplied completely assembled and ready for installation.*
*Displacement readings are taken manually using a dial gauge, or with a readout head fitted and monitored remotely using a digital indicator or a datalogger. Manual readout extensometers may be converted to remote reading at any time after installation.*

## Construction

*The basic rod assembly is designed for grouted anchorage in the borehole, and consists of up to 7 continuous spring steel or fibreglass rods. Each rod is sheathed in a neat fitting nylon tube, and connected at its bottom end to a ribbed steel anchor. The anchor design allows all longer rods to pass through it, and in some types can be fitted externally with hydraulic or spider anchors.*

*The sheathed rods are assembled around a compressible filler and spirally bound for rigidity. The whole assembly is externally sheathed in a polyethylene tube, sealed at each anchor point. This construction provides a void for limited transverse shearing of the borehole without the rods being jammed.*

*Before the coiling of the extensometer, the ends of the rods are locked in position at the collar and released only after the grout has 'set' in the borehole. The top ends of the rod are fitted with threaded brass bullets, which are free to move within guide tubes in the stainless steel collar assembly. The reference face is clearly marked with each rod length.*

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FOR FURTHER INFORMATION
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*Ground displacements are monitored by measuring the relative movements of the brass bullets against a machined face which forms part of the collar assembly.*

*The reference face is protected by a threaded cap when not in use (manual readings). The extensometer can be converted to remote readout by replacing the protective cap with an adaptor (to receive the readout head) and connecting the transducers to the brass bullets*

## Installation

*All Geosystems extensometers are supplied fully assembled in 1.2 metre diameter coils. At the site, the extensometer is uncoiled and fitted with a combination of grout/air bleed tubes (or with hydraulic or spider anchors.)*

*After the extensometer is installed and the anchors grouted, the protective cap is removed, the rods released and initial displacement readings recorded.*



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