

MEASURING ANCHOR

MODEL EMA-11



INTRODUCTION

The Encardio-rite model EMA-11 measuring anchor, also known as rock bolt extensometer, is a combination of rock bolt and extensometer. EMA-11 Measuring anchor is used to determine the load exerted on rock bolts. It is a precision instrument designed to help civil engineers and geologists to evaluate anchor system forces and their distribution within the bolt and hence its safety and effectiveness.

FEATURES

- Easy to handle and install.
- Reliable and robust.
- Replaces a system anchor, thus no extra bore hole is required.
- High accuracy.

APPLICATION

- To determine the effectiveness of anchoring system in an underground cavity or tunnel.



The measurement with model EMA-11 measuring anchor is economical, very reliable and is preferred at locations where access to the mouth of the borehole is available.

OVERVIEW

The principle function of measuring anchor is to determine the depth where force is exerted on the bolt due to loosening effects of rock.

Model EMA-11 measuring anchor consists of a steel hollow anchor/rock bolt with a precise 4-point extensometer integrated in it. The measuring bars inside the hollow bolt have anchor points at each quarter of the total length so that the extension of the rock bolt and the corresponding forces can be determined.

MEASUREMENT METHOD

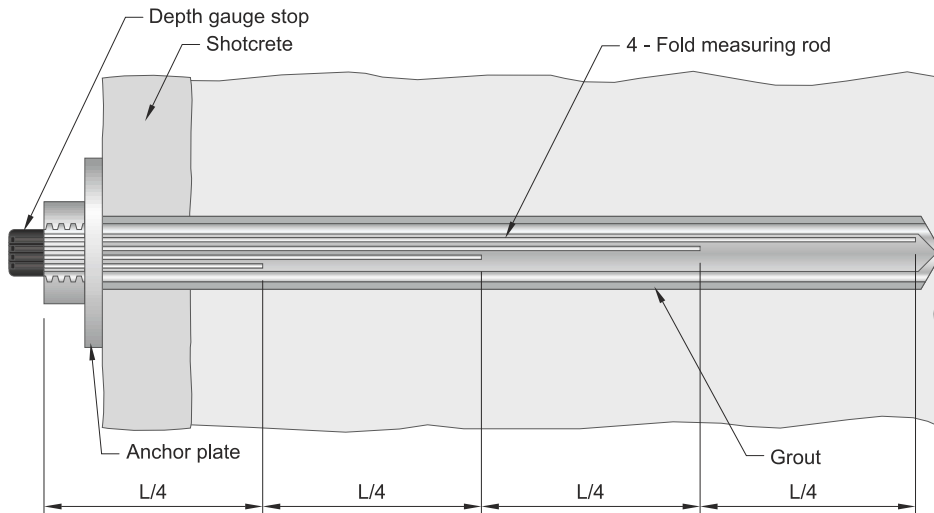
Model EMA-11 measuring anchor has a breaking force of up to 250 kN. The length offered ranges from 3 m to 6 m.

The change in length due to compression or extension between individual measuring bars are taken by measuring the depth of the near end of the respective measuring bars from a reference plate provided at the mouth of the borehole. A digital caliper/micrometer depth gage with a resolution of 0.01 mm is used to take the readings.

An electrical head assembly consisting of four potentiometric sensors is optionally available for electrical output. Encardio-rite model EDI-53P readout/data logger or EDAS-10 data acquisition system are available for monitoring measuring anchor at site.

SPECIFICATIONS

Length	3, 4, 6 m
Fixed points	4
Bore hole diameter	51 mm
Anchor diameter	26.7 mm nominal
Loading capacity	250 kN
Electrical measurement	
Range	± 5 mm
Resolution	0.01 mm
Linearity	0.2% fs
Enclosure	IP 65



*All specifications are subject to change without prior notice

ENCARDIO-RITE ELECTRONICS PVT. LTD.

A-7, Industrial Estate, Talkatora Road Lucknow, UP - 226011, India | P: +91 522 2661039-42 | Email: geotech@encardio.com | www.encardio.com

International: UAE | Qatar | Bahrain | Bhutan | Europe | USA

India: Lucknow | Delhi | Kolkata | Mumbai | Chennai | Bangalore | Hyderabad | J&K