



Tape Extensometer Model 7140-RT-CONVEX

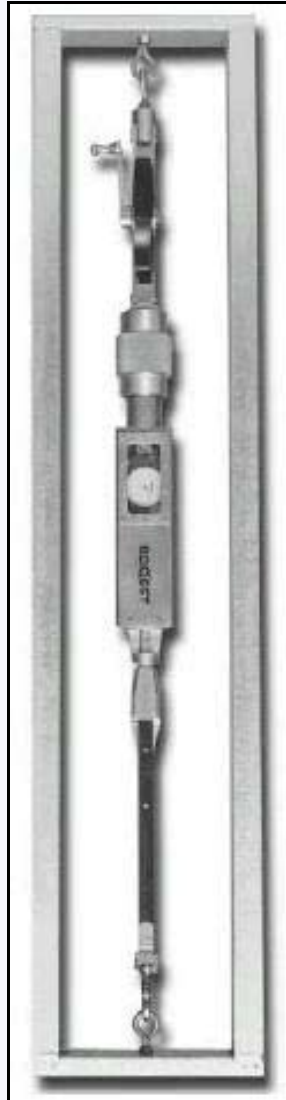
FEATURES

- **Lightweight and rugged design**
- **Rapid Measurement**
- **One-man operation**
- **All-steel version available for coal mines**

APPLICATIONS

For the measurement of:

- *Mine roof sag*
- *Tunnel closure*
- *Support deformation of excavations*
- *Displacements of unstable slopes and structures*



ROCTEST

Description

The CONVEX Tape Extensometer basically consists of a steel survey tape with punched holes, loaded on a reel fixed to the body of the instrument. It incorporates a tensioning mechanism for the tape as well as a dial indicator based distance measuring system.

Two hooks are provided, one at the movable extremity of the

tape and the other on the reel frame. Tensioning of the tape to a predetermined load is easily done by rotating a large knurled collar until two reference lines are precisely aligned.

For an actual measurement, the CONVEX is stretched between two reference points consisting of two stainless steel eyebolts fixed on their respective anchor.

A calibration frame can be used to regularly check the zero stability of the instrument and to determine, when applicable, a temperature related correction.

Installation and Reading

Proper anchoring of the reference points is required to complete an accurate measurement.

The anchors which must be chosen according to the conditions of the applications are either rebars (A) to be grouted in boreholes, or expansion shell anchors (B). The eyebolts can also be directly bolted (C) or welded (D) on structural steel beams.

(See illustration over-page for reference.)

To take a reading, the snap hook fixed to the movable end of the tape is attached to one reference point. Moving towards the opposite anchor, the tape unwinds until it is possible to fix the hook mounted on the reel onto the second reference point.

The slack in the tape is then taken up by winding up the reel

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and the locking pin located at the front of the extensometer, inserting it into the nearest hole of the tape. The knurled collar is then rotated to tension the tape up to a predetermined value (typically 133.5 N (30 lbf)) corresponding to the precise alignment of the two reference lines.

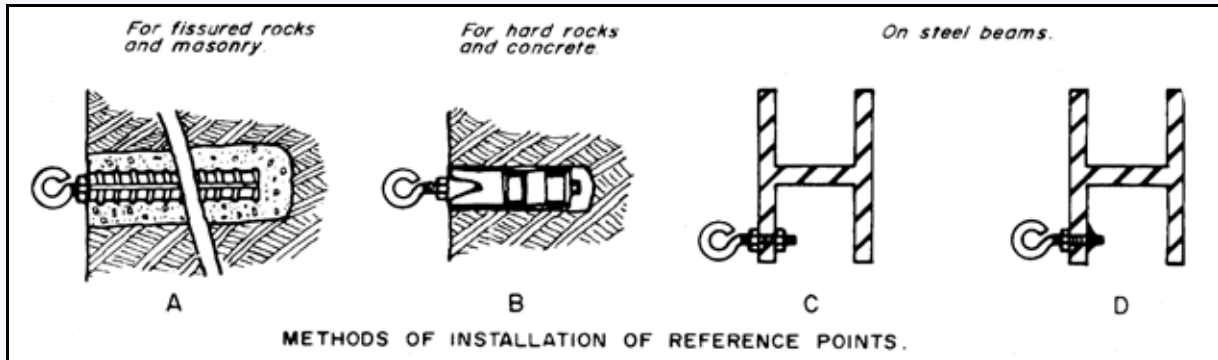
The reading is made by adding the tape reading to the caliper and dial indicator readings. The same measurement is repeated several times to obtain a mean value.

Accessories

The optional calibration frame can be used before a series of readings to verify that the instrument has not been damaged, and to establish a basis for a correction due to temperature variations at the measurement site.

Ordering Information

Part No.	Description
CX-1020	Basic instrument with 20 m tape
CX-1030	Basic instrument with 30 m tape
CX-1066	Basic instrument with 66 ft tape
CX-1100	Basic instrument with 100 ft tape
CX-2000	Carrying case
CX-3000	Calibration frame
CX-4000	Reference point
CX-4001	Extra nut for eyebolt
CX-5000	Reference point with anchor A
CX-6000	Reference point with anchor B
CX-7020	Spare 20 m tape
CX-7030	Spare 30 m tape
7066	Spare 66 ft tape
7100	Spare 100 ft tape



Specifications

CONVEX TAPE EXTENSOMETER

- Ranges: 20 m, 30 m (66 ft, 100 ft)
- Dial indicator resolution: 0.05 mm (0.001 in)
- Repeatability: ± 0.10 mm (± 0.005 in)
- Weight with 20 m tape: 2.2 kg (5.0 lb)

REFERENCE POINT

- Stainless steel eyebolt with one nut
- Diameter: 6.35 mm (0.25 in)
- Length: 50 mm (2.0 in)

ANCHOR

- Type A
 - Diameter: 20 mm (0.78 in)
 - Length: 150 mm (5.9 in)
 - Borehole diameter: 25 mm (1.0 in)
 - Borehole length: 180 mm (7.1 in)
- Type B
 - Borehole diameter: 12.5 mm (0.5 in)

Due to on-going design improvements and reviews, we reserve the right to amend product and specifications without prior notice



FOR FURTHER INFORMATION

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