

Home
Demec
Furnaces
Accountancy
Publishing

The DEMEC mechanical strain gauge

DEMEC strain gauges - an introduction

The DEMEC Mechanical Strain Gauge was developed as a reliable and accurate way of taking strain measurements at different points on a structure using a single instrument. With a discrimination of two microstrains (on the 200 mm gauge) and gauge lengths of 50 to 2000 mm the DEMEC strain gauge is ideal for use on many types of structure for strain measurement and crack monitoring.



DEMEC Mechanical Strain Gauge 100mm gauge length

Digital version of the DEMEC



The digital DEMEC strain gauge incorporates a digital indicator with a resolution of 0.001 mm, zero set, preset and output for SPC.

The indicator can be connected to a data processor for recording and analysis of results. The indicator displays spindle movement digitally by means of a linear

encoder and has a response speed of 1000 mm/sec, and is battery operated.

DEMEC strain gauges - description

The DEMEC strain gauge consists of an invar main beam with two conical locating points, one fixed and the other pivoting on a special knife edge. The points locate in pre-drilled stainless steel discs which are attached to the structure with adhesive. Movement of the pivoting point is measured by the strain gauge which is attached to a base plate on the invar beam. Design is such that thermal movement within the instrument is negligible.

DEMEC strain gauges are supplied in a wooden case and come complete with an invar reference bar, for control measurements, and a setting out bar to enable accurate positioning of locating discs.



DEMEC strain gauges - specification

Microstrains represented by one division on the dial gauge, or one increment on the digital indicator.

Gauge length	Dial version microstrains	Digital version microstrains
50 mm	20	-
100 mm	16	8
150 mm	10.7	5.3
200 mm	8	4
250 mm	6.4	3.2
300 mm	5.6	2.8
400 mm	4	2
500 mm	3.2	1.6

Each division is visually sub-dividable on the dial version of the DEMEC.

Accessories

A variety of methods of locating the DEMEC points are available.

