



HIGH STABILITY ANCHOR LOAD CELL VIBRATING WIRE STRAIN GAUGE VERSATILE DESIGN

The VH vibrating wire load cells are rugged and compact sensors used to measure tensile or compressive loads

Description

The load sensing element of the **VH** is a cylinder of high strength, heat-treated steel that withstands rough handling and loading. The local compressive strains induced in the cell by the tension in the anchor are measured by one to six vibrating wire sensors. The average of the strain readings from the sensors represents the mean load on the anchor, minimizing the effects of eccentric loading.

A steel housing with o-ring seals covers the cell and protects the strain gauges from mechanical damage and water infiltration. The load cell and connector are waterresistant. A plain jacketed cable links the load cell to a readout or data acquisition system. The cable exit is parallel to the surface of the steel housing to give better clearance. Centralizer bushings and load distribution plates are also available.

A thermistor incorporated into the gauge supplies information on the effects of temperature on the materials

Key Features

- Fits rock bolts, tiebacks, struts or arch supports
- Monitor tensile or compressive loads
- Rugged waterproof construction
- High stability and sensitivity
- Vibrating wire strain gauges
- Eccentric loading possible

Applications

- Rock bolts and soil nails monitoring
- Mines and slope stabilization
- Anchored retaining walls and strut loads
- Tie-down anchors for buoyant structures
- Load monitoring in structures

Specifications

Range	500, 1000, 1500, 1800, 2500, 5000, 10 000 kN
Accuracy	±0.5 % F.S.
Resolution	0.025 % F.S. (min.)
Overload	1.5 × F.S.
Sensors	3 or 6 vibrating wire strain gauges
Operating temperature	-20 to +80°C
Cable	IRC-82A, IRC-121

Load ranges are nominal only and can be modified to suit project requirements.

For dimensions, contact Roctest.

System accuracy depends on end loading conditions.

Ordering information

Please specify:

- Range
- Dimensions
- Hollow or solid center cell
- Cable connection and cable length

Optional accessories

- Load distribution plate and bearing plate
- Load distribution plate incorporating centralizer bushing
- Readout instruments: MB-3TL, SENSLOG