
VIBRATING WIRE LOAD CELL

Model VH

APPLICATIONS

The VH vibrating wire load cell is designed for direct measurement of loads in tieback anchors and rockbolts, or compressive loads in structures. Typical applications include:

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

DESCRIPTION

The load sensing element 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 water-resistant. A plain jacketed cable links the load cell to a readout or data acquisition system. On large cells, 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.



VH load cells with plates

FEATURES

- Vibrating wire strain gauges
- Rugged waterproof construction
- Eccentric loading possible
- High stability and sensitivity
- Versatile design fits all types of rock bolts, tiebacks, struts or arch supports
- Can be used to monitor tensile or compressive loads

SPECIFICATIONS

Range	500, 1000, 1500, 2500, 5000, 10 000 kN
Accuracy	±0.5% F.S.
Resolution	0.025% F.S. (min.)
Overload	1.5 × F.S.
Sensors	1 to 6 vibrating wire strain gauges
Operating temperature	−40 to +80°C
Cable	IRC-61, IRC-121

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

For dimensions, contact Roctest Telemac.

System accuracy depends on end loading conditions.

ACCESSORIES

- Load distribution plate and bearing plate
- Load distribution plate incorporating centralizer bushing
- Readout instruments: MB-6T(L), SENSLOG

ORDERING INFORMATION

Please specify:

- Range
- Hollow or solid center cell
- Cable connection and cable length
- Connector waterproofing for underwater installation
- Accessories