IRHP & IRCL - VW Instrumented Rebar

Strain & Load Sensor

HIGH STABILITY AND SENSIVITY
RUGGED, WATERPROOF CONSTRUCTION
AVAILABLE FOR MOST REBAR SIZES

Instrumented rebars and sister bars are used to measure load in concrete reinforcing bars or strain in concrete structures.

Description

An instrumented rebar or sister bar is a load sensing element consisting of a hollow reinforcing bar containing a coaxially-mounted vibrating wire strain gauge. Compressive or tensile loads induced into the bar are measured directly with the strain gauge. Instrumented rebars are individually calibrated, correlating strain to load.

Instrumented rebars and sister bars are supplied with an integral temperature sensor. Model **IRHP** refers to the standard instrumented rebar size while model **IRCL** refers to the sister bar.

Key Features

- Rugged, waterproof construction
- High stability and sensitivity
- Available for most rebar sizes
- Can be used as a sister bar, incorporated into a rebar reinforcement system, or grouted into a borehole for ground support
- Not affected by bending
- Long-term stability
- Integrated thermistor for temperature monitoring

Applications

- Dam
- Pile monitoring
- Mining safety
- Surface and underground openings
- Monitoring stress in tunnel linings
- Rock reinforcement and support

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Specifications

MODEL	Nominal diameter[1]	Calibration range	Maximum working load recommended	Maximum working load to yield
IRHP-2000	50 mm (2 in.)	360 kN	690 kN	1155 kN
IRHP-1375	34 mm (1 3/8 in.)	160 kN	275 kN	325 kN
IRHP-1250	31 mm (1 1/4 in.)	130 kN	215 kN	260 kN
IRHP-1125	28 mm (1 1/8 in.)	100 kN	160 kN	200 kN
IRHP-1000	25 mm (1 in.)	80 kN	135 kN	160 kN
IRHP-0750	19 mm (3/4 in.)	45 kN	75 kN	90 kN
IRCL-0500	13 mm (1/2 in.)	27 kN	28 kN	37.9 kN

[1] *Other sizes available upon request*

Range of gauge	3000 με
Accuracy	±0.25% F.S.
Resolution	0.4 με
Operating temperature	−20 to +80°C
Thermistor	3kΩ (see model TH-T)
Cable	IRC-41A (IRC-390 available with some sizes)
Nominal rebar length	1 m (standard)

Ordering Information

Please specify:
- Rebar diameter
- Cable type and length

Optional Accessories

- High strength coupling
- Readout instruments: MB-3T(L), SENSLOG

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