



Hydraulic Load Cells



Hydraulic Load Cells are constructed from stainless steel. The load is distributed equally over the loading area of the cell by a thick, machined steel distribution plate. The load, when applied to the cell, causes a pressure increase in the hydraulic fluid, and this change in pressure may be measured via a Bourdon Tube Gauge or a variety of electrical transducers.

Two designs are available. An annular cell, and a solid cell for the measurement of compressive force. Both designs are available with the following readout methods:

1. A Bourdon Tube Gauge. This is the most simple method, but if directly connected requires access or visibility. The gauge can be mounted a short distance away and connected to the cell by a flexible hose.
2. Various types of electrical transducers, allowing for remote readout and data acquisition, are also available.

technical data

Annular cells are available to suit all load ranges for both cable bolts and continuously threaded rock bolts. Please contact RST for more information.

Custom cells, either solid or annular, can be fabricated to suit any specialized application or ranges.

A very stiff distribution plate is required in order to insure that the load is applied equally over the pad of the cell. The outside diameter of this plate is equal to the loading area of the cell with an identical inside diameter.

Bearing plates may not be required if adequate provision has been incorporated into the installation design. If required, the bearing plate is greater in diameter than the cell. Both bearing and distribution plates are machined from mild steel and zinc plated for corrosion protection.

Hydraulic Load Cells are sensitive to temperature changes, and are not recommend for use in applications where temperature fluctuations may occur.

For highest accuracy and temperature compensation, RST recommends either strain gauge or vibrating wire type cells.



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applications

Rock anchors.

Soil anchors.

Concrete and post-tensioning.

Measurement of compressive loads between structural members.

features

Simple and reliable hydraulic operation.

Automated data acquisition systems compatible.

Low profile.

Remote readout capability.

optional equipment

Distribution plates.

Bearing plates.

Data acquisition systems.

Digital readout instruments.

Optional, fully enclosed, lockable housing to protect the data gauge.

ordering info

All Hydraulic Load Cells maybe ordered using simple notation.

For example, part # HLC-100-1 indicates the following:

HLC: Hydraulic Load Cell

100: max. capacity required (Kips)

1: hole sizes in inches

Please specify O.D. and height when ordering.

GEOTECHNICAL . MINING . STRUCTURAL



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