HYDLO - Hydraulic Load Cell

Load Cell

EASY INSTALLATION
RUGGED CONSTRUCTION
NEGLIGIBLE DRIFT

The HYDLO Hydraulic Load Cell is designed for measurement of loads in tieback anchors and rockbolts, or compressive loads in structures.

Description

The HYDLO consists of a sealed cell composed of two plates welded together around the periphery and filled with de-aired oil. The cell is directly connected to a pressure gauge (scale in kPa). The load applied to the cell induces an oil pressure variation, which is sensed by the pressure gauge. The load value in kN can be determined using the table on the calibration sheet. The compact size of the HYDLO makes installation easy, and allows for quick and simple readings.

Two configurations of HYDLO are available. To monitor a tensile load, a hollow center cell enables the passage of an anchor through the cell. To monitor a compressive load, a solid center cell is used.

With both of these configurations, remote pressure reading is available by connecting the cell with flexible tubing to a remote vibrating wire or electrical 4–20 mA pressure transducer. This optional feature suits situations where access to the cell is difficult.

The HYDLO can accommodate small inclinations in loading. Larger misalignments should be compensated with the use of spherical seats.

Hydraulic load cells are very sensitive to temperature changes. Non-hydraulic cells (e.g. VH & ANCLO) are better suited for applications where significant temperature fluctuations are anticipated.

Key Features

- Easy installation and readings
- Negligible drift – suitable for long-term measurements
- Eccentric loading possible
- No maintenance required
- Remote reading available

Applications

- 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

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Specifications

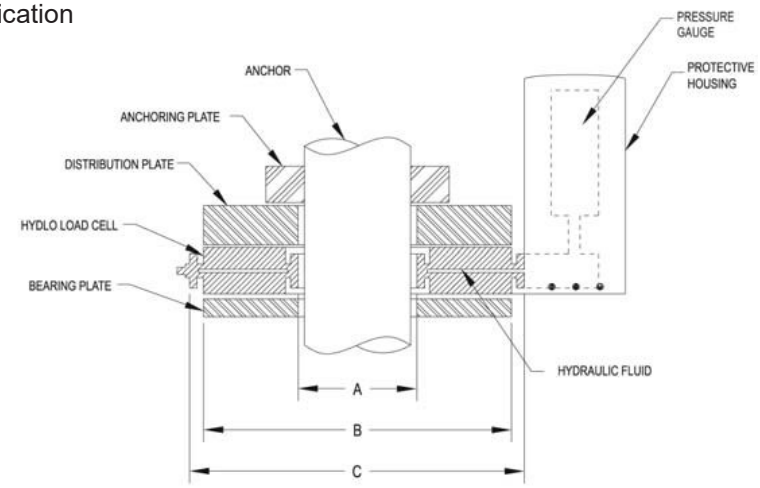
Accuracy[1]	±1 % F.S.
Operating temperature	−20 to +60°C
Overload	1.2 × F.S.

Capacity	250 kN	500 kN	750 kN	1000 kN	1500 kN	2000 kN
DIMENSIONS						
A	35 mm	50 mm	75 mm	105 mm	105 mm	135 mm
B	123 mm	144 mm	180 mm	219 mm	244 mm	265 mm
C	144 mm	162 mm	202 mm	236 mm	261 mm	288 mm
Cell thickness	28 mm	28 mm	28 mm	28 mm	30 mm	30 mm
Distribution plate thickness	30 mm	40 mm	40 mm	45 mm	45 mm	65 mm
Protective housing	70 × 115 × 162 mm high					

Specifications may change when HYDLO is fitted with optional pressure transducer.

[1] Valid between 20-100% of full scale range.

HYDLO Typical Application



Ordering Information

Please specify:

- Capacity

Optional Accessories

- LCD display
- Maximum pressure indicator
- Remote reading with VW or electrical 4–20 mA•
- Distribution and bearing plates
- Readout instruments

Smartec SA
Via Pobiette 11
CH-6928 Manno, Switzerland
Phone +41 91 610 18 00
Fax. +41 91 610 18 01
Email info@smatec.ch
Web www.smartec.ch

Doc: E50152-160131

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