

Hydraulic Anchor Load Cells HLC-6000 Series

Hydraulic Anchor Load Cells consist of a sensitive pressure pad. The void inside the cell is filled with de-aired fluid. When load is applied to the cell the pressure of the inside liquid changes. The changes in pressure correspond directly to the load applied.



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Overview



The Geosense® HLC-6000 series Hydraulic Anchor Load Cells consist of a sensitive pressure pad formed by joining two stiff steel discs at their periphery. The void inside the cell is filled with de-aired fluid. When load is applied to the cell the pressure of the inside liquid changes. The changes in pressure correspond directly to the load applied.

Manufactured with a centre hole to accommodate anchors, rock bolts and tendons.

The pressure in the loads cell is measured either by a manometer or a vibrating wire transducer (VWDT-5000) which are available in the following models:

HLC-6000 - Manometer (scale in kN) for pressure indication

HLC-6500 - Vibrating wire transducer

Model HLC-6500 can be read with a VW-2106 direct readout or connected into a GeoLogger data acquisition system.

Mounting surfaces should be flat and parallel for optimum performance and the use of very stiff abutment plates and load distribution plates is recommended.

The abutment plate (provided locally) is normally made to suit specific site requirements and the load distribution plate (supplied by Geosense) should be inserted between the load cell and the anchor head.

APPLICATIONS

Measurement of load acting on:

Ground anchors

Rock Bolts

Tie-backs

Struts

Arch Supports

Props

FEATURES

Robust stainless steel construction

Load distribution plates available

Manual or VW transducer readout

Proven long-term accuracy

Accommodates eccentric loading

Data logger compatible

Available with plug connector or cable



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Specifications

HYDRAULIC LOAD CELL

Description	HLC-6000	HLC-6500
Over range capacity	20%FS	20% FS
Resolution	0.5% FS	0.025%FS
Accuracy	< 1 % FS	± 1 % FS
Temperature range	-30°C to + 85°C	-30°C to + 85°C
Material	Stainless Steel	Stainless Steel
Output signal	Manual	Frequency

LOAD CELLS - STANDARD DIMENSIONS

Capacity(kN)	ID (mm)	OD (mm)	Load cell height(mm)	Load distribution plate height (mm)
250	40	140	30	30
500	71	170	30	30
750	92	205	30	30
1000	110	235	30	30
1500	150	320	30	30
2000	210	405	30	30

ANCILLARY EQUIPMENT

Manual readouts

Data acquisition systems

Load distribution plates

Centraliser bushes

Cable Type 900 - VW Sensor with Foil Screen & Drain Wire

Cable end protection

Fly lead

Jump lead

ORDERING INFORMATION

Capacity

Cable length & protection

Readout

Load distribution plate

Centraliser bush



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