



ENCARDIO RITE



CENTER HOLE LOAD CELL

MODEL ELC-30M

INTRODUCTION

The Encardio-rite model ELC-30M is a precision engineered hydraulic center hole load cell, specially designed for civil engineering applications. It is fluid filled and is constructed from stainless steel. It is available in capacities ranging from 250 kN to 2000 kN. Higher capacity load cells and those having an internal diameter different from the standard specified range are available on request.

DESCRIPTION

The model ELC-30M hydraulic center hole load cell is made of a sensitive pressure pad which is formed by joining together two very stiff steel discs at their periphery. The space inside the cell is filled with de-aired fluid. When load is applied to the cell, the pressure on the fluid changes. This change in fluid pressure is used to record the variation in load being applied to the cell.

The load is distributed equally over the loading area of the cell by a thick, distribution plate.

Load distribution plates can be used both above & below the load cell to ensure an even distribution of load on to the cell. Load distribution plates are not required if adequate distribution & bearing plates have been incorporated into proposed installation arrangement.

READ-OUT

The pressure in the load cell is measured by either a manometer or a vibrating wire pressure transducer. The model ELC-30M load cell is thus available in following two variants, depending on the application:

- ◆ Model ELC-30MG - with gage for pressure indication
- ◆ Model ELC-30MV - with vibrating wire pressure sensor

FEATURES

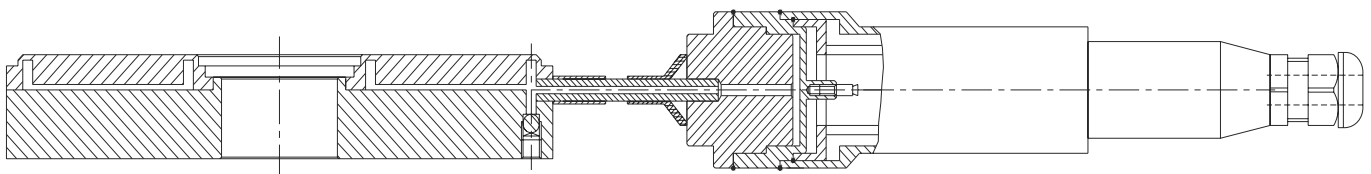
- ◆ Rugged, robust and low cost.
- ◆ Suitable for hostile & severe environment.
- ◆ Easy installation.

APPLICATIONS

- ◆ Determination of load in rock bolts, foundation anchors, soil anchors.
- ◆ Determination of roof convergence in underground mines.
- ◆ Proof testing and long term performance monitoring of different kind of anchor systems.
- ◆ Compressive load measurement between structural members i.e. tunnel supports or at the junction between a beam and the top of a pile strut.



The manometer is simple to read and cost effective read-out option for the hydraulic load cell. It is directly attached to the load cell and is calibrated in kN.



The vibrating wire pressure transducer is of stainless steel construction and incorporates the latest vibrating wire technology to provide electrical read-out. A glass to metal seal is provided for easy cable connection.

The data from the vibrating wire pressure transducer can be read by model EDI-51V vw read-out unit/datalogger. The data can also be remotely read by model EDAS-10 automatic data acquisition system.

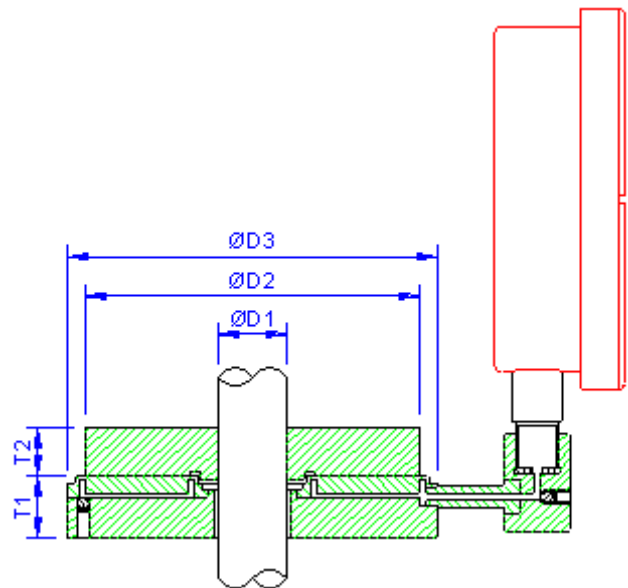
DIMENSIONS

ELC-30M CENTRE HOLE HYDRAULIC LOAD CELL

Capacity kN	T1 mm	D1 mm	D2 mm	D3 mm	Weight kg
250	28	35	123	144	5.0
500	28	50	144	165	6.0
750	28	75	180	202	8.0
1000	28	105	219	240	10.0
1500	28	105	219	240	10.0
2000	30	135	265	288	13.0

DISTRIBUTION PLATE

Capacity kN	Load distribution/bearing plate			
	O.D. mm	I.D. mm	T2 mm	Wt. kg
250	123	35	30	2.5
500	144	50	40	4.5
750	180	75	40	6.5
1000	219	105	45	10.5
1500	219	105	45	10.5
2000	265	135	65	21.0



SPECIFICATIONS

ELC-30MV/G-X

Capacity (kN)	250, 500, 750, 1000, 1500, 2000
Overload capacity	20% fs
Temperature	-10 to 55°C

ORDERING INFORMATION CODE

Model ELC-30M(V/G)-X/Y

└── id in mm
└── Capacity in kN

All specifications are subject to change without prior notice.

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