

	PRODUCT CATEGORY:
	LOAD CELLS + PRESSURE SENSORS + STRESS METERS

Total Earth Pressure Cell

Total Earth Pressure Cells are designed to measure stress acting on plane surfaces. Total Earth Pressure Cells are constructed from two circular stainless steel plates, welded together around their periphery. The annular space between these plates is filled with deaired glycol. The cell is connected via a stainless steel tube to a transducer forming a closed hydraulic system. The stress is then converted to a signal and may be remotely read on a variety of portable readout units or data loggers.

RST Total Earth Pressure Cells are calibrated as a complete assembly (rather than just the sensor) to capture the calibration of the complete cell for highest quality of data.



Total Earth Pressure Cell - Axial Mounted, Model LPTC06-V-M

A typical Total Earth Pressure Cell

Total Earth Pressure Cell shown with mounting ears, Model LPTC-EARS4

> APPLICATIONS

Earth embankments and dams.	Foundations, retaining walls, and piles.
Pipelines and culverts.	Railroad bases.
Beneath raft foundations.	Tunnel linings.
Mine backfill monitoring.	

> FEATURES

Long term stability.	High accuracy and sensitivity.
Constant monitoring capability.	Ease of data logging.
Stainless steel construction.	Either vibrating wire or strain gauge transducers.
The transducer is located 46 cm (18 in.) from the cell to avoid any influence from the transducer housing.	A 20:1 height to diameter ratio minimizes the effects of stress distribution on the mean plane. (9 in. and 12 in. models)

ORDERING INFO

TRANSDUCER	STANDARD CELL DIA.	STANDARD PRESSURES (0.35 MPa - 3 MPa)	HIGH PRESSURES (>3 MPa - 20 MPa)	LOW PRESSURES (<0.35 MPa)
Vibrating Wire Axial	16.2 cm (6.38 in.)	LPTC06-V-M	LPTC06-V-M-HP	-
Vibrating Wire	24.1 cm (9.5 in.)	LPTC09-V	LPTC09-V-HP	LPTC09-V-LP
Vibrating Wire	31.7 cm (12.5 in.)	LPTC12-V	LPTC12-V-HP	LPTC12-V-LP
Silicon Strain Gauge	24.1 cm (9.5 in.)	LPTC09-S	LPTC09-S-HP	LPTC09-S
Silicon Strain Gauge	31.7 cm (12.5 in.)	LPTC12-S	LPTC12-S-HP	LPTC12-S

OPTIONAL

ITEM	PART #
Vibrating Wire Cable	EL380004
Mounting Ears (4 tabs)	LPTC-EARS4

OTHER ORDERING INFO

Part number.
Pressure range requirements.
Cable length.

SPECIFICATIONS

DESCRIPTION	MODELS	
	LPTC-V	LPTC-S
Transducer Type	Vibrating Wire	Silicon Strain Gauge
Range - Standard Calibration	Up to 2.0 MPa (300 psi)	Up to 2.0 MPa (300 psi)
Range - Max Available	20 MPa (3000 psi)	20 MPa (3000 psi)
Calibrated Accuracy	0.15% F.S.	0.15% F.S.
Resolution	0.025% F.S. minimum	Infinite
Excitation Voltage	5 V sq. Wave	Dependent on sensor
Signal Output	1200 - 2000 Hz	4-20 mA
Thermistor	Yes (standard)	Optional (can be added)
Conductor	4 X #22 (2 for VW, 2 for Thermistor)	4 X #22 2 X #22
Operating Temperature	-29° to +65°C -20° to +150°F	
*Various types of strain gauge transducers are available, contact RST for info.		