

Applications

The Model CGEO-PC1/PC2 is designed to measure total pressure in earth fills and embankments, it provides a direct means of measuring total pressures, i.e. the combination of effective soil stress and pore water pressure, such as bridge abutments, diaphragm walls, fills and embankments, retaining walls surfaces, sheet piling, slurry walls and tunnel linings.

Description

The Model CGEO-PC1 consists of two circular stainless steel plates, welded around their periphery, with a narrow cavity filled with de-aired oil. Changing earth pressure squeezes the plates together causing a corresponding increase of oil pressure, which is measured by a vibrating wire pressure transducer connected via a short length of steel tubing.

The Model CGEO-PC2 has an extra-thick back plate to minimize point loading effects when installed on concrete or rock surfaces.

Key Features

- ◆ Accurate, long-term stability
- ◆ Robust design and reliable
- ◆ Fit for manual or remote reading
- ◆ Integral thermistor
- ◆ Over-voltage surge arrestor protects against electrical damage



Comprehensive information about this product and our full range is available at www.cgeo-instruments.com
If you would prefer to speak with someone directly, please call +852 2206 0092 or email info@cgeo-instruments.com

Main Specifications

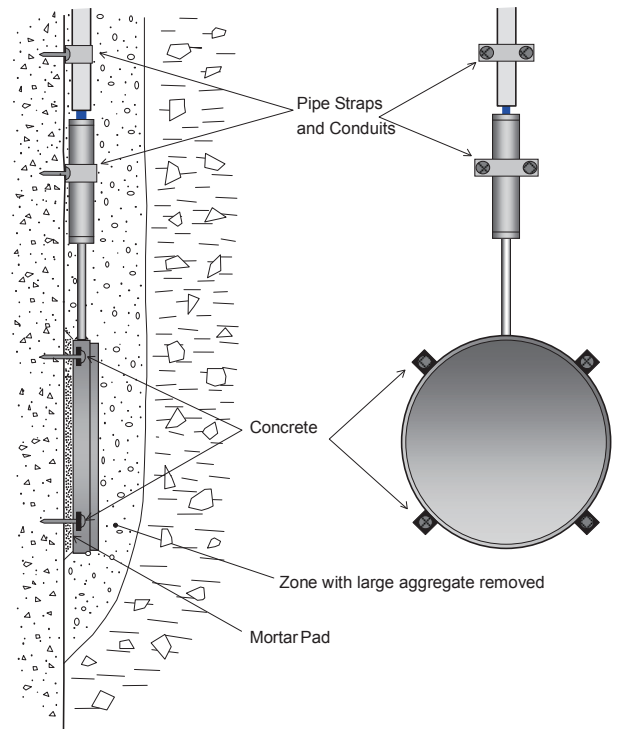
Model	CGEO-PC1	CGEO-PC2
Range (MPa)	0.35/0.5/0.7/1.0/2.0/3.0/5.0	
Resolution	0.025% F.S.	
Accuracy	±0.1% F.S.	
Temperature range	-20 to +80°C	
Over-range capacity	50% F.S.	
Dimensions	Dia. 230mm	

Operation

The Vibrating Wire Pressure Cell is used to measure total pressure, particularly in earth or rockfill structures.

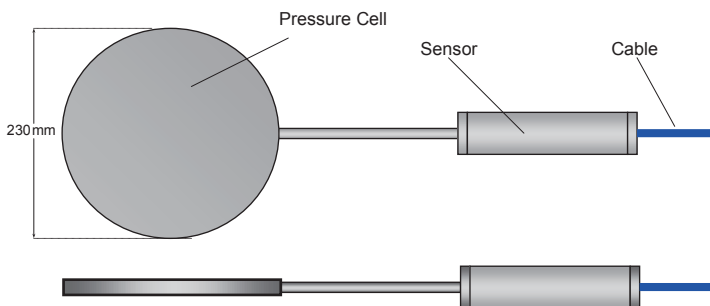
The Model CGEO-PC1 Pressure Cell is constructed from two thin pressure sensitive plates. They can be positioned in the fill at different orientations so that soil pressures can be measured in two or three directions. Special armored cables are recommended in earth dam applications.

The Model CGEO-PC2 Pressure Cell is designed to measure soil pressures on structures. The back plate of the cell which bears against the external surface of the structure is thick enough to prevent the cell from warping. The other plate is thin and is

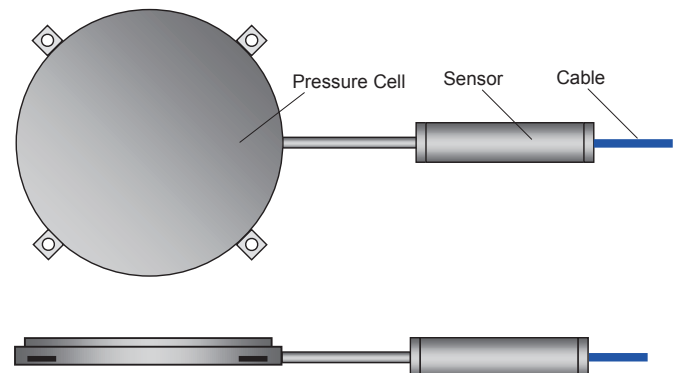


welded to the back plate in a manner which creates a flexible hinge to provide maximum sensitivity of changing soil pressures.

The change in pressure is converted by the VW transducer into an electrical signal and may be remotely read using a VW readout or datalogger.



Model CGEO-PC1 Pressure Cell



Model CGEO-PC2 Pressure Cell



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