

VW Total Pressure Cell

Model GV-2419

Application

Total pressure cells measure the combined pressure of effective stress and pore-water pressure. Typical applications of total pressure cells include ;

- . Monitoring total pressure exerted on a structure to verify design assumptions.
- . Determining the magnitude, distribution, and orientation of stresses.

Operation

Total pressure cells are formed from two circular plates of stainless steel. The edges of the plates are welded together to form a sealed cavity, which is filled with fluid. Then a pressure transducer is attached to the cell. The cell is installed with its sensitive surface in direct contact with the soil. The total pressure acting on that surface is transmitted to the fluid inside the cell and measured by the pressure transducer.

Installation

Total pressure cells are embedded in fill or mounted on structures. In fill, cells are often installed in arrays. Each cell is placed in a different orientation and covered with hand-compacted fill. On structures, the cell is typically placed into a recess so that its sensitive side is flush with the surface of the structure.

Specification

Items	GV-2419
Transducer Type	Vibrating Wire
Range	3.5, 5, 7, 10, 20, 30Bar
Accuracy	< 0.1% F.S.
Resolution	0.025% F.S.
Linearity	< 0.5% F.S.
Thermal Effect on Zero	< 0.05% F.S
Standard Cell Dimension	200, 250mm
Operating Temperature	-20°C ~ +80°C
Output	2000 ~ 3000 Hz
Temperature Range	-20°C to +80°C
Material (Outer body)	Stainless Steel

