

VW PIEZOMETER



Specifications

Sensor Type	Vibrating Wire Sensor
Resolution	0.025%FS
Accuracy	±0.1% FS
Max Pressure	1.5 X rated range
Filter	50-micron, sintered stainless steel
Temperature Sensor	Thermistor (-40 to +125 °C)
Material	Stainless Steel
Size	19 X 122 mm
Weight	205 g

Introduction

VW Piezometer is based on the vibrating wire principle. The wire is preloaded with tension and attached on a stainless steel diaphragm. The preloaded tension on the wire may change due to liquid applying force on the diaphragm. The wire is electrically stimulated by coil and magnets and the corresponding frequency is measured. VW Piezometer is used to measure static and dynamic pressures of all types of liquids. For example, pore water pressure in dams and adjacent to tunnels, and measurement for ground water levels.

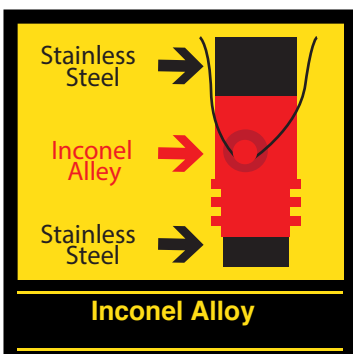
Application

- Monitoring water level
- Monitoring pore pressure at a slope
- Monitoring pore pressure in an earth dam
- Monitoring pore pressure in reclamation soil

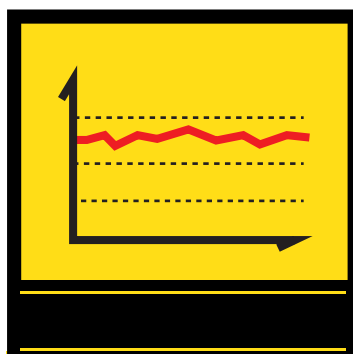
Brand and Model

Label: Sanlien
Model: PZ 1050 (50psi/3.5bar)
PZ 1100 (100psi/7.0bar)

Features



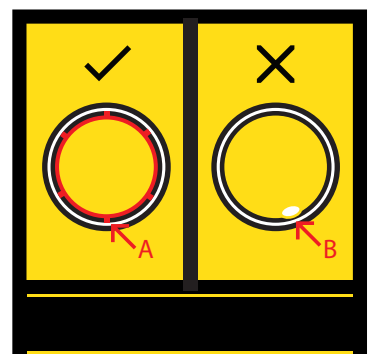
The core body of our Piezometer uses Inconel alloy instead of stainless steel. This type of alloy is well suited for service in extreme environments subjected to pressure and heat. The physical behavior of Inconel alloy enhances our VW Piezometer with a longer life and more stable data output.



We designed our housing to joint with the VW core mechanically, in order for the core diaphragm to have direct contact with water. Many manufacturers simply use epoxy to joint the housing and VW core together. When jointing the housing and VW core with epoxy, air bubbles may flow in. The air bubbles may prevent the VW core of having direct contact with the diaphragm, which leads to faulty data.



Our sensor has a built-in temperaturesensor. In addition, the built-in temperature sensor is AEC-Q200 qualified and has accuracy of 0.5 °C between 0 °C and 50 °C.



We design two layers of seals on our "cable connection to VW Piezometer" assembly process in order to prevent water leakage.