

Electric Piezometer - PME01

For more accuracy, electrical piezometers can be used in pore pressure measurement cases. The filter tip is equipped with an electrical sensor (VW or Piezoresistive type) to convert the pore pressure to a measurable electrical signal. This is done in the borehole right after the filter tip and the signal is transferred to the ground level by an electrical cable. So in the electric piezometers, electrical cable replaces the PVC pipe that is usually used in stand pipe type. There are a variety of pressure transducer ranges and accuracies so that the user can select the most appropriate type for the project.

Application

Some of the applications of this instrument are:

- Groundwater determination where high accuracies are required.
- Automatic reading and saving the pressure info.
- Equipping the system with an alarm system to enable warning.
- Suitable for deep boreholes where pipe attachment and its weight can become difficult.

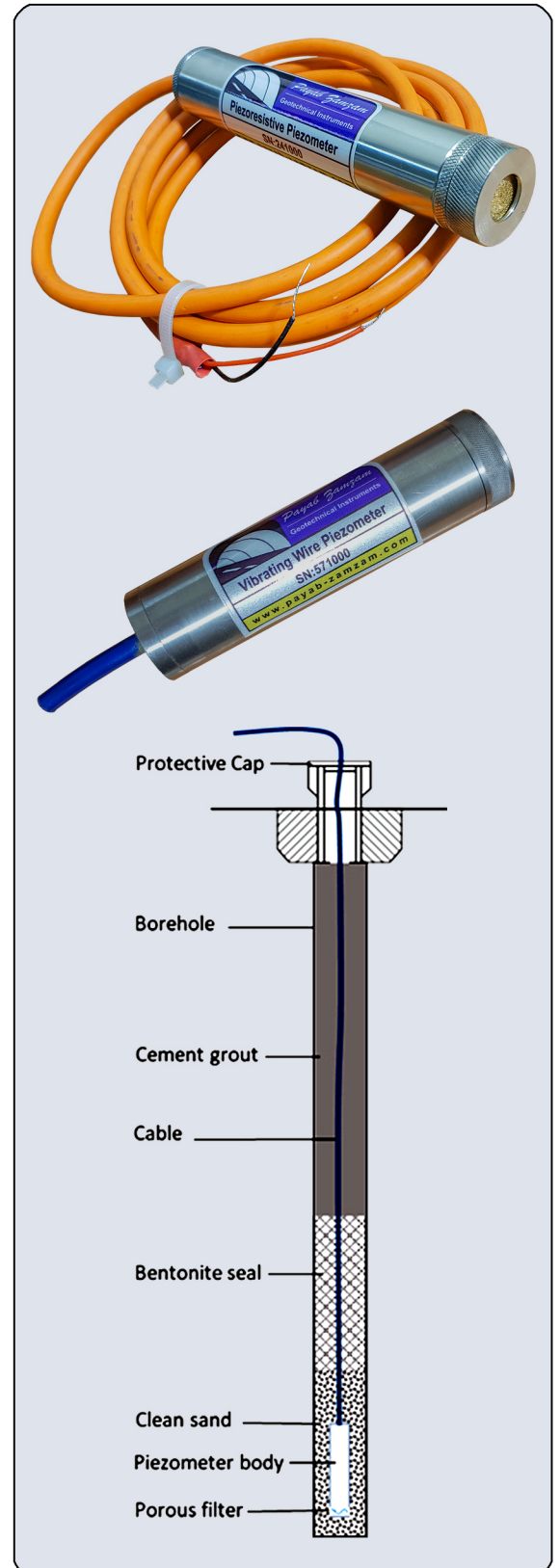
Operation and Installation

Installation of electrical piezometers are in many ways similar to the stand pipe piezometer apart from the fact that no PVC pipe exists and only the piezometer steel body (consisting of a filter tip plus the transducer) is lowered to the borehole with an electrical cable. Once the filter reaches to the required depth, then clean and washed sand is poured around the filter to make sure no particles clog the filter. When the sand reaches at the top of the filter, some sealant particles (usually Bentonite pellets) are discharged above the sand (for about a meter) to seal the hole. The purpose of this operation is to make sure that water from the ground enters the filter only from the filter level. Once the sealing is done, the rest of the borehole is cement grouted. Any changes in pore pressure can be read from the ground level by a suitable read-out unit.

Similarly, multiple piezometers can be installed in the same borehole at different levels.

It is important to saturate the filter before installation and fix the filter tip in an upward direction to avoid air entrapment in the piezometer.

Technical Spec	
Sensor type	Piezoresistive transducer / VW
Pressure range	2-200 Bars
Pore size for the filter	7-70 Microns
Piezometer dimensions (D x L)	32x200 mm
Filter material	Sintered metal



Order information

PME01-AAA-BB-CC
 AA: Pressure range in Bars
 BB: Pore size in microns (7 or 70)
 CC: Cable length in m