

Stand pipe Piezometer – PMXT00

In most of Geomechanical projects, pore pressure is a crucial parameter which needs to be considered in the engineering designs. The Standpipe Piezometer (Casagrande S.P.) is a device by which pore water pressure in soil and rock formations is measured from a borehole. It usually consists of a filter tip (ceramic or polymeric type) surrounded by clean sand fill, which is attached to a series of PVC pipes to reach at the ground level. Water elevation in the PVC pipe is measured with a Water Level Meter and is converted to the water pressure simply by assuming 0.1 Bar/m for water.

Application

Some of the applications of this instrument are :

- Groundwater determination and monitoring its changes.
- Dewatering and drainage operations.
- Monitoring pore pressures in rock fill dams and embankments.
- Slope stability investigations and design.

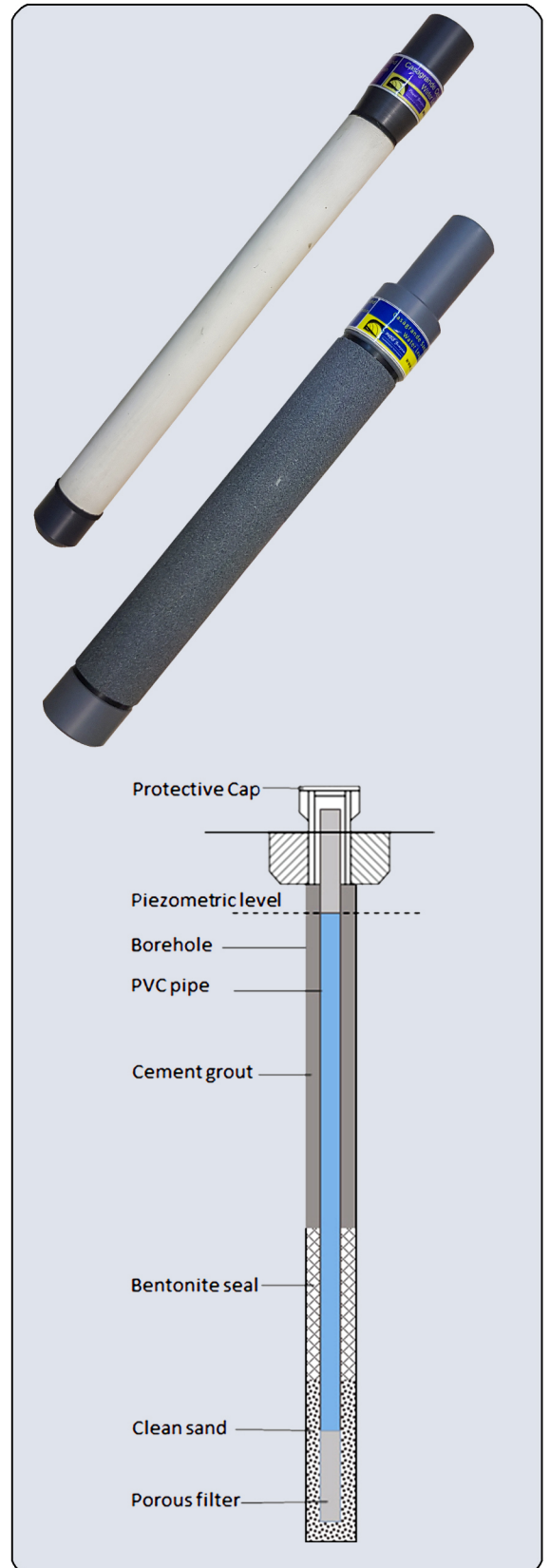
Operation and Installation

A borehole is drilled to the required depth with diameter above 63mm. A filter is attached to the first PVC pipe and is lowered to the borehole. More Pipes are attached to each other (screwed) till the filter reaches to the required depth (usually bottom of the borehole). Then clean and washed sand is poured around the filter to make sure no particles clog the filter. When the sand reached 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. Once the water enters the filter and rises to the PVC pipe, its level can be read with a water level probe.

In cases where pore pressure measurement is required at different depths, multiple PVC pipes are attached to different filter tips and can be installed in the same borehole. The installation procedure for each piezometer is the same, only the borehole diameter shall be bigger to accommodate for more than one pipe .

Technical Spec

Pore size for the filter	70 Microns
Filter dimensions (D x L)	32x200 mm
Filter material	Ceramic / Polymeric
PVC pipe length	1.5 and 3m (standard version)
PVC Pipe dimensions (ODxD)	32x22mm



Order information

PM-A-T00-B

A: Filter type, Ceramic (C) or polymeric (P)

B: PVC pipe section length (1.5 or 3m)