

USER'S MANUAL

STANDPIPE PIEZOMETER

Installation, maintenance and measurement of all the equipment must be performed only by well trained experts. Carefully read the user manual prior to installation. PMT shall not be responsible for the problems caused by errors in conversion of data, installation and connection of wires.

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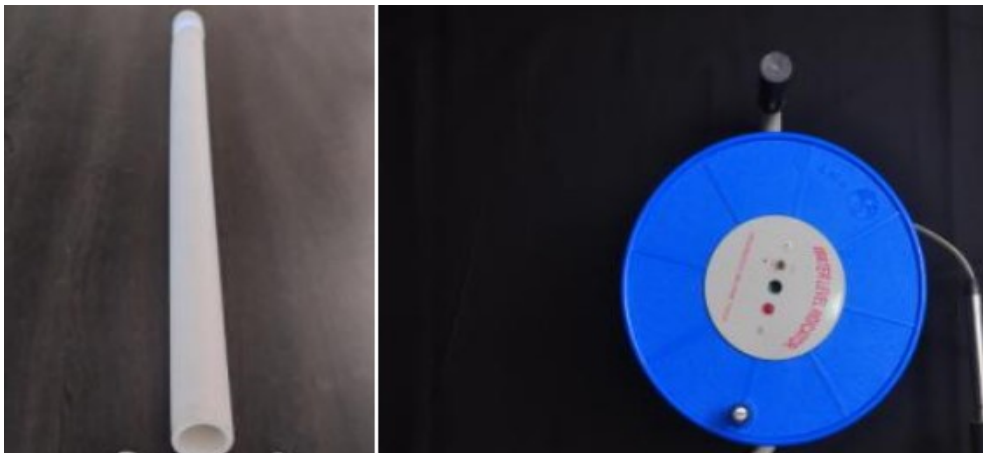
Ordering Information

Standpipe Piezometer

Introduction:

The measurement and control of water pressure in soil and rock, including:

- Construction control and stability monitoring of embankments, dams and reservoirs.
- Stability investigations of natural and cut slopes.
- Control of de-watering and drainage operations.
- Hydrological investigations and water supply.
- Pollution and environmental studies.
- Permeability measurements.



Features:

- Ideal piezometer to ascertain the piezometric level during routine size investigation.
- Simpler than other alternatives and often more reliable.
- Response to head variations is comparatively slow; generally used for long term observations or for short term readings in high permeability ground.

Description:

A standpipe tube with a porous piezometer tip connected at its lower end is installed in a borehole. Alternative types may be driven or pushed into soft soil, and different tip designs are available to suit various types of ground. For borehole installations, bentonite and grout are used to seal the borehole above the tip. Groundwater can enter the tube only via the tip.

Water pressure is usually measured with a 'dipmeter' water level probe and corresponds to the height of the water surface in the standpipe above the piezometer tip. However, a bubble tube inserted in the standpipe and sealed to the standpipe at the upper end may be required for remote readings of piezometer level, for example when a foundation piezometer is subsequently covered by an embankment.

Installation:

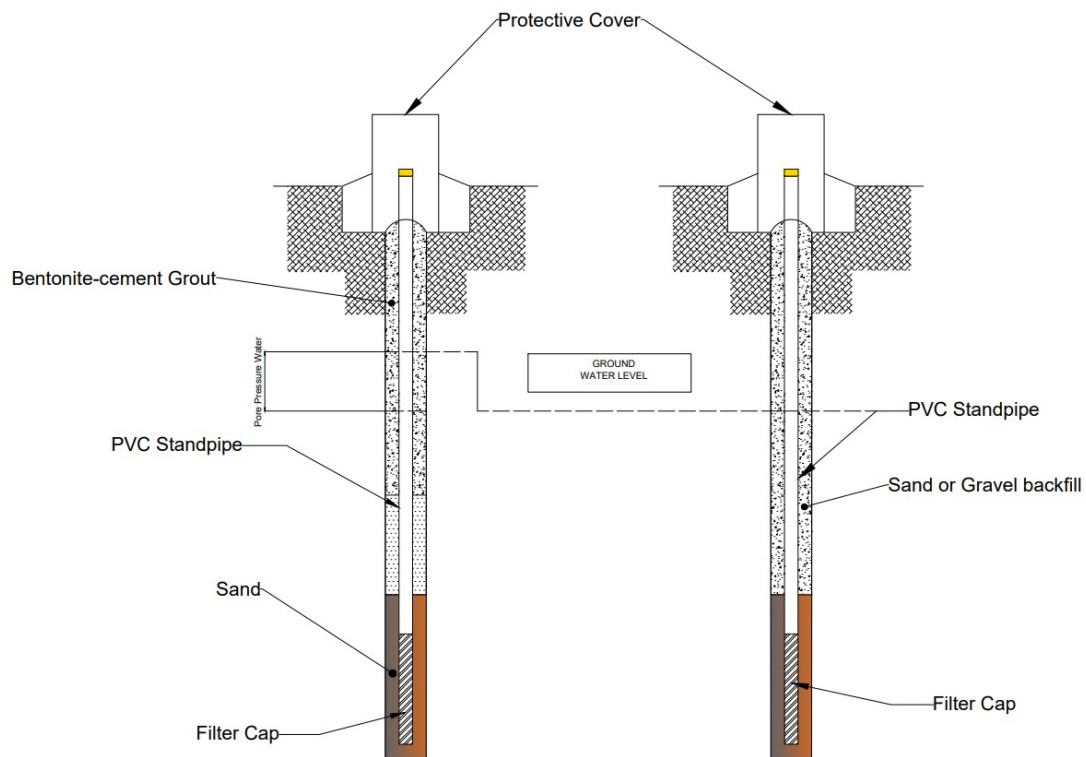
The hole diameter is usually 100 -150 mm although smaller sizes may be used in rock. Air flush drilling and consequent entrapment of air in the ground should be avoided. Coarse, clean sand filter material is placed through water to the proposed base of the piezometer tip and is compacted using punner. The piezometer tip saturated in water, is coupled to the appropriate standpipe, section by section, and lowered until the tip reaches the sand filter.

A plug to prevent entry of grout into the sand filter is usually placed in the form of balls of stiff bentonite or bentonite granules dropped through the water and tamped into place. Back filling is completed for example with bentonite, cement mortar or bentonite-cement grout, through a termite pipe which is positioned above the bentonite plug and withdrawn as grouting proceeds.

Specifications:

Depth	Upto 100m
Power	9 VDC Battery
Tape Material	Fiberglass reinforced tape jacket
Filter tip material	Polyethylene filter
Probe material	Stainless steel

Dimensions and ranges are nominal only and can be modified to suit project requirements



BOREHOLE STAND PIPE PIEZOMETER

Readout unit:

Dip meter or water level meter comprising of co-axial cable with graduation mounted on winding drum incorporating small battery with audio signal indicator. When the probe enters water an audible signal is emitted from the drum.

Ordering Information:

- ◆ Application field.
- ◆ Dimension of stand pipe.
- ◆ Borehole depth and diameter.