

Standpipe Piezometer & Water Level Indicator

Standpipe Applications

Standpipe piezometers are used to monitor piezometric water levels. Typical applications include:

- Monitoring pore-water pressure to determine the stability of slopes, embankments, and landfill dikes.
- Monitoring the effectiveness of dewatering schemes.
- Monitoring seepage and ground water movements in embankments, landfill dikes, and dams.

Components

The standpipe piezometer consists of a filter tip joined to a riser pipe. The filter has 60 to 70 micron pores and is made from polyethylene or porous stone. The riser pipe is typically made from PVC plastic pipe.

A water level indicator is used to monitor the piezometric water level.

Installation

After the borehole is drilled, the filter tip and riser pipe are assembled and installed downhole.

Sand is tremied to the bottom of the borehole to form a sand intake zone around the filter tip. A bentonite seal is placed above the intake zone and the orehole is backfilled with a bentonite-cement grout.

The riser pipe is terminated above ground level and capped to prevent entry of rain water.

Standpipe Operation

Pore-water pressure around the intake zone drives water into the standpipe. The water level in the standpipe rises or falls with changes in pore-water pressure.

A water level indicator is used to monitor the changes.

Advantages

- Economical components.
- Simple to read.
- No active downhole parts.

Water Level Indicator

Water level indicators are used to monitor water levels in standpipes and wells.

Operation

The indicator consists of a probe, a cable with laser-marked graduations, and a cable reel. The hub of the cable reel contains batteries, electronics, a bright LED lamp, and a beeper.

The operator lowers the probe into the standpipe or well. When the probe contacts the surface of the water, the LED illuminates and the beeper sounds.

The operator then reads the depth-to-water measurement from the graduations on the cable.

Advantages

Small Probe fits into most standpipes and wells. Weight can be attached to the probe tip

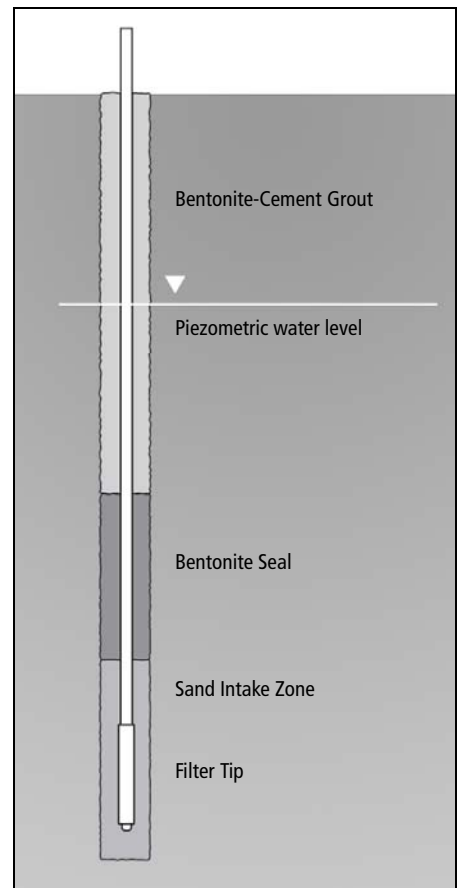
Convenient Cable stores neatly on the reel. Steel conductors provide strength and excellent dimensional stability.

Laser-Marked Graduations are as durable as the cable itself. English-unit and metric-unit graduations are available.

Sturdy Reel is built for years of daily use. It features bronze bearings and aluminum plate sides.



Water Level Indicator & Filter Tips



Water level in standpipe is produced by pore-water pressure at the filter tip.



STANDPIPE FILTER TIPS

Polyethylene Tip, 12" (305 mm) . .51417402
Polyethylene Tip, 24" (610 mm) . .51417404
Porous Stone Tip, 12" (305 mm) . .51405102
Porous Stone Tip, 24" (610 mm) . .51405104
Optional Adapter to 1.25" pipe . .50712521
Optional Adapter to 1.5" pipe . .50712531

Standpipe filter tip is used with plastic riser pipe. Tip mates directly with 0.75" slip coupling and is supplied with an adapter kit (51405150), which includes adapters for 0.5" and 1" pipe.

Filter Material: Polyethylene tip is made from hydrophilic polyethylene and has 60 micron pores. Porous stone filter is made from fused aluminum oxide (Norton Alundum) and has 68 micron pores.

Filter Size: Filter is 1.5" diameter cylinder, 12 or 24 inches long.

The smallest reel has a handle and clips to hold the probe.



WATER LEVEL INDICATOR SPECS

Probe: Stainless steel body and tip, polyethylene insulator. 10 x 170 mm (3/8" x 6.6").

Cable: 3.2 mm (1/8") diameter polyurethane jacket with two copper-clad, steel conductors inside. Graduations are marked with laser and cannot be rubbed off. Clean cable with laboratory grade detergent, such as Alconox® or Liquinox®.

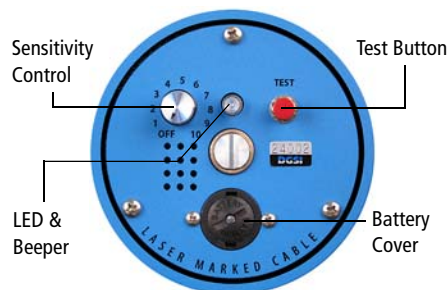
Reel Construction: Heavy-gage aluminum plate sides, PVC spool, rotating knob. Larger reels are equipped with a stand made of strong steel tubing, a probe holder, and a reel brake.

Sensitivity Control provides consistent results in different well and water conditions and helps eliminates false triggering.

LED and beeper provide a positive indication of contact with water.

Test button is used to check the batteries, beeper, and LED.

Battery cover provides easy access to two AA batteries. Low-power circuits provide excellent battery life.



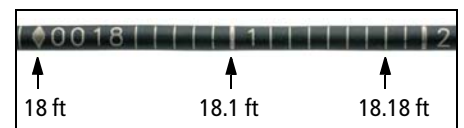
ENGLISH-UNIT WLI

Cable	Reel	Weight	Part Number
100'	7"	3.5 lb	51690010
150'	7"	4 lb	51690014
100'	9"	5 lb	51690012
150'	9"	5.5 lb	51690015
300'	9"	7.5 lb	51690030
500'	11"	11 lb	51690050
1000'	11"	17 lb	51690100

METRIC-UNIT WLI

Cable	Reel	Weight	Part Number
30 m	180 mm	1.6 kg	51690303
50 m	180 mm	1.8 kg	51690304
30 m	230 mm	2.3 kg	51690300
50 m	230 mm	2.5 kg	51690305
100 m	230 mm	3.4 kg	51690310
150 m	280 mm	4.7 kg	51690315
200 m	280 mm	5 kg	51690320
300 m	280 mm	7.7 kg	51690330

English Graduations: 0.01 foot graduations with labels at 0.1 foot and 1 foot intervals.



Metric Graduations: Centimeters are marked and labelled. Numbers in the label serve as 2 mm graduations, as shown below

