

Horizontal Digitilt AT Inclinometer Probe

Applications

Horizontal inclinometer measure profiles of settlement or heave. Typical applications include monitoring settlement and heave under storage tanks, embankments, dams, and landfills.

Operation

The horizontal version of the Digitilt AT inclinometer system consists of inclinometer casing, a horizontal probe, control cable with Bluetooth reel, pull cable, and the Digitilt Reader app. The inclinometer casing is installed in a horizontal trench or borehole with one set of grooves aligned to vertical. Use a dead-end pulley and cable-return pipe if the far end of the casing is not accessible.

The probe, control cable, pull-cable, and readout unit are used to survey the casing. The initial survey establishes the profile of the casing, and subsequent surveys will reveal changes in the profile if ground movement occurs.

The horizontal inclinometer probe employs a MEMS accelerometer to measure tilt in the plane of the probe wheels.

During a survey, the probe measures tilt at half-meter or 2-foot intervals as the travels from one end of the casing to the other.



Then reverse the probe end-for-end and draw it through the casing a second time. Tilt measurements from the reversed probe eliminate any error due to sensor bias and generate checksums for validating the survey.

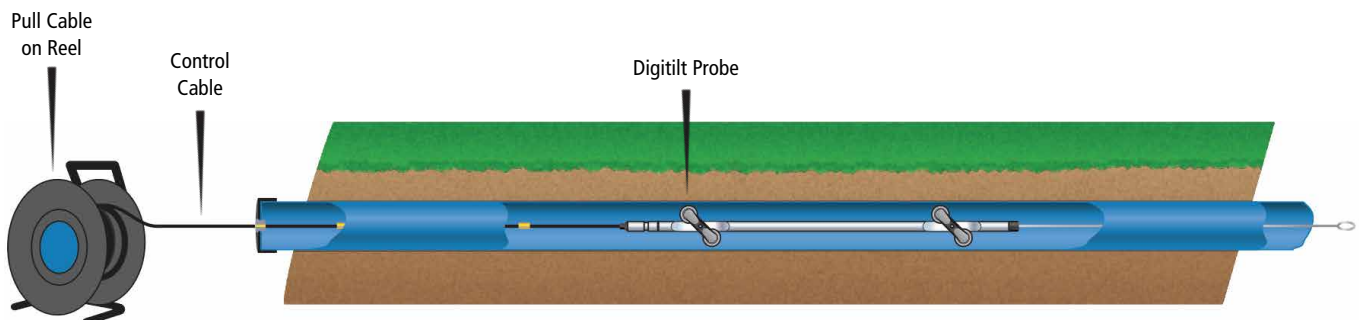
The Digitilt AT probe returns settlement measurements in your choice of engineering or sine units. The Digitilt Reader app generates and plots complete settlement profiles by summing the settlement measurements.

Advantages

Full Settlement Profiles: Horizontal inclinometers provide complete profiles of differential settlements, compared to measuring discrete settlement cells.

Simple Operation: Horizontal inclinometers are much easier to use than other types of settlement profilers. There are no liquid reservoirs or pressure sources to adjust and maintain.

Proven Reliability: The Digitilt AT horizontal probe is based on our proven Digitilt AT traveling inclinometer probe.



HORIZONTAL DIGITILT PROBE

Horizontal Probe, Metric-Units . . 50333600

Horizontal Probe, English-Units . . 50333500

Digitilt AT inclinometer probe includes a carrying case, accessories and an instruction manual.

Control cable and tablet reader are not included.

	Metric	English
Tilt sensor	MEMS	MEMS
Wheel Base	500 mm	24 inch
Range	± 30°	± 30°
Resolution	0.005 mm/m	0.0002" /ft
Repeatability	± 0.003°	± 0.003°
Temp	-20 to +70° C	-4 to +158° F
Material	Stainless Steel	

Calibrated Range: Metric and English unit probes are calibrated to ±30° and have an over-range to ±35°.

CONTROL CABLE AND BLUETOOTH REELS

Reel with 30m cable. 50334303

Reel with 50m cable. 50334305

Reel with 75m cable. 50334307

Reel with 100m cable. 50334310

Reel with 100' cable. 50334100

Reel with 150' cable. 50334150

Reel with 200' cable. 50334200

Reel with 300' cable. 50334300

7" RT-V7000 Tablet. 50330980

Backpack for Digitilt AT System. . 50330900

25m Digitilt AT Extension Cable. . 50331225

50' Digitilt AT Extension Cable. . . 50331250

Bluetooth reel provides 40 hours of operation on one charge. Charge time is 5 hours. Controls include on/off switch with auto-off timer and LEDs for power, charge state, and Bluetooth connection.

Control cable Metric cables have 0.5m graduations with numeric depth labels every meter. English cables have 2 foot graduations with depth labels every 4 feet. Graduations are measured from top wheels of probe. The four-conductor cable has a Kevlar strain member, and polyurethane jacket.

DIGITILT READER APP

Plot checksums or changes with a single tap. Use the high resolution plots to validate the survey before you leave the site. The app can share plots by email

Digitilt Reader App Download

Using an Android device, visit play.google.com and search for "**Digitilt Reader**."

Requirements: Certified Android device, as listed on the Slope Indicator website.

Capacity: Number of inclinometers and surveys is limited only by device memory. Maximum depth 300m or 1000 ft. Depth intervals are multiples of 0.5m or 2 ft.

Survey: Displays list of inclinometers. Tap to start a survey. Tap and hold to edit inclinometer parameters.

Survey Screen: Large, readable characters. Shows active depth, depth last recorded, readings in mm, inches, or sine units, checksums, and progress bar. Record button prompts user to wait, tap, or pull. Other features include easy depth changes and automatic bookmarks.

Plots & Data: Plots checksums, profiles, change-from-initial, and change-from-last in high resolution. Displays data table for inspection and survey-time corrections.

Send: Sends inclinometer data to PC as email attachments or syncs via Dropbox. If internet is not available, data files are transferred via USB cable and Windows file manager.

Readout includes hand switch, battery charger with international plugs, and USB cable for PC.

Compatibility: Digitilt probes, both vertical and horizontal, Digitilt tiltmeters, and spiral sensors.

DIGIPRO2 SOFTWARE

DigiPro2 Software Download

DigiPro2 License Key 50310101

DigiPro2 software is an essential component of the classic system. It has two modes, basic and advanced.

DigiPro2 Basic is free to use and provides all the functions necessary to retrieve surveys from the DataMate and make simple plots.

DigiPro2 Advanced provides correction routines, reports, and other features, enabled by purchase of a license key. Features are described in a separate PDF and on the website.

PULL CABLE

Pull Cable 50402310

Extra Carabiner 02750012

Extra Saddle Clamp 02700067

Pull cable is 1/8" stranded stainless steel cable and is used to draw probe to far end of casing. Order one pull cable for each casing installation. If using a dead-end pulley, length of pull cable should be at least twice the length of the casing.

A carabiner and saddle clamp are included with the probe. These are installed on the pull cable and left in the casing with the pull cable. Additional carabiners, saddle clamps, (and pull cable) should be ordered if there is more than one casing installation to be monitored.

DEAD-END PULLEY

Dead-End Pulley 50302951

Cable-Return Pipe 50711104

Coupling for Pipe 50711604

Dead-end pulley is required when far end of casing is not accessible. Rated for casing up to 60 m (200') long.

Cable-return pipe is used with dead-end pulley. 1/2" schedule 40 PVC pipe is supplied in 10" (3.05 m) lengths.

Couplings are used to join lengths of pipe. PVC cement is required for assembly.