



# Pile Installation Recorder

## Pile Installation Recorder (PIR)

*For Quality Control of ACIP and CFA piles*

### Cost Effective. Real Time. Accurate.

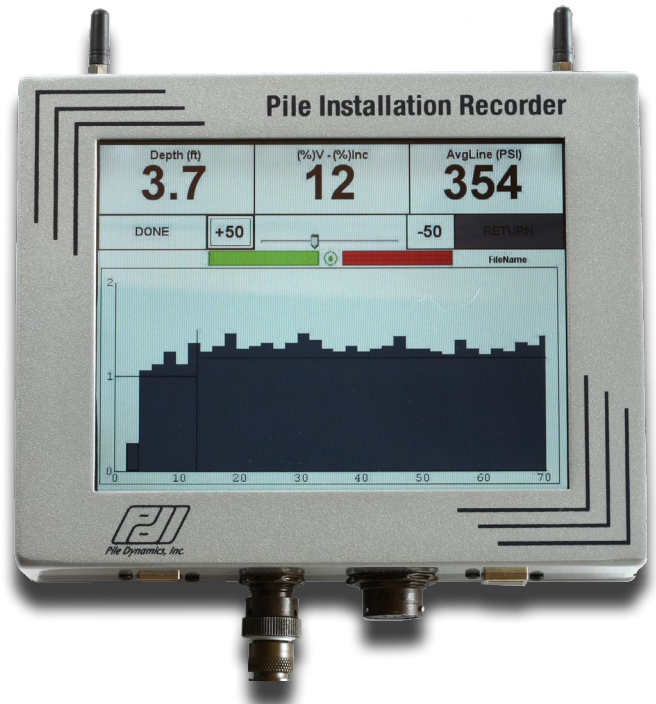
An Automated Monitoring Equipment that assists in the installation of augered cast-in-place (ACIP)/continuous flight auger (CFA) and drilled displacement piles by displaying pumped grout/concrete as a function of depth in real time. PIR is a cost-effective way to reduce the uncertainty of concrete volume placement.

The equipment may be installed in any crane, including those operating with low headroom. As the crane proceeds from pile to pile, the operator easily monitors the installation of every pile on the job in real time displaying:

- Grout volume pumped versus depth
- Grout line pressure
- Auger tip depth
- Auger torque, rotation, crowd and withdrawal rate
- Incremental drilling time / drilling rate
- Start and stop times

PIR-PLOT software allows data analysis with a depth increment different than the one used in the field. PIR-PLOT summary report includes:

- Actual and theoretical volumes
- Total length drilled
- Duration of drilling, grouting, and total installation
- Starting and return head
- Actual and requirement percent of neat line



## PIR Viewer

An optional handheld device for an inspector's or supervisor's use outside of the cab to simultaneously follow the installation. Results may be printed in the form of an installation log, on a small field printer, immediately after each pile is completed.

PIR-PLOT graphs the following quality control variables versus depth:

- Grout pressure
- Grout volume
- Drilling rate
- Withdrawal rate
- Torque pressure
- Percent of neat line
- Drilling resistance

The key parameters for a precise installation are pumped grout volume and auger depth. The PIR accurately records and displays both in real time. The equipment consists of a main unit installed in the crane cabin, a depth measurement device, a magnetic flow meter, a pressure sensor to measure grout line pressure, and optional devices including a pressure sensor for determining auger torque and a proximity sensor for measuring auger rotation. The Angle Analyzer, a device that measures pile angle of installation, is an optional accessory.

Pile Dynamics, Inc. (PDI) is the world leader in developing, manufacturing and supplying state of the art QA/QC products and systems for the deep foundations industry. The company is headquartered in Cleveland, Ohio, USA, with offices and representatives worldwide. For additional information visit us at [www.pile.com](http://www.pile.com) or contact [info@pile.com](mailto:info@pile.com) today.



- Records and displays accurately measured, pumped grout volume and auger depth in real time, optionally with grout pressure or torque measurements and RPM
- Installation log results printed immediately on a small field printer
- May be installed in any type of dedicated or general purpose drilling rig equipment
- Can be used in low headroom applications
- Optional PIR viewer allows inspector or supervisor to simultaneously monitor each installation

