Shaft Area Profile Evaluator for Dry Holes (SHAPE®-AIR)

Wireless Data Acquisition of Drilled Shaft Radius, Volume and Verticality in a Dry Shaft

**Fast. Accurate. Cost Effective.**

Drilled shafts are rarely ideal cylinders, and irregularities can affect capacity, durability and performance. SHAPE®-AIR is a cost-effective, quality assurance testing device used for deep foundations such as drilled shafts, bored piles, and more to ensure the design intentions are satisfied for the project. SHAPE®-AIR has eight Lidar Sensors to scan the sides of an excavation, providing a quick and economical view of the shaft verticality, radius, shape, and drilled hole volume, prior to placing concrete in a dry hole.

SHAPE®-AIR offers:

- Quick connection to Kelly bar or can be used with an optional winch system
- Multi-channel Lidar sensor device to scan the sidewalls of a dry excavation
- Wireless data acquisition at a rate of approximately one (1) scan per second
- Eight (8) channels scanned simultaneously
- Effective in dry, open holes or shafts
- Sitelink® Remote Technology
- Battery powered

SHAPE®-AIR’s drilling stem advancement rate is approximately one (1) foot per second (300mm/sec), offering 360°, 2D and 3D profile views.
SHAPE®-AIR Data Collection Software

SHAPE®-AIR software generates reports based on data collection during testing. The software allows users to view or edit the collected data with the following features:

- **Edit Edges** - select edges for the circle fit process
- **Pressure** – view how the pressure increased during descension and decreased during ascension
- **Sensor Data** – view measured pulses
- **Report** – view the sensor profiles containing their verticality and eccentricity information

The program produces a 3-dimensional image of the boring by calculating the distance between each sensor and the excavation wall.

- Quick, cost effective views of the excavation to ensure design intentions
- 8 ultra-sonic signals providing 360°, 2- & 3-Dimensional profile views
- Wireless data acquisition

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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).