Shaft Area Profile Evaluator

Shaft Area Profile Evaluator (SHAPE®)

Wireless Data Acquisition of Drilled Shaft Radius, Volume and Verticality

Fast. Accurate. Cost Effective.

Drilled shafts are rarely ideal cylinders, and irregularities can affect capacity, durability and performance. SHAPE® is a cost-effective, quality assurance testing device used for deep foundations such as drilled shafts, bored piles, slurry walls, and more to ensure the design intensions are satisfied for the project.

SHAPE® has eight ultra-sonic signals 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 wet conditions.

SHAPE® offers:

- Quick connection to Kelly bar or can be used with an optional winch system
- Multi-channel ultrasonic device to scan the sidewall condition of wet pour drilled shafts
- Wireless data acquisition at a rate of approximately one (1) scan per second
- Eight (8) channels scanned simultaneously and built in calibration pulse to improve accuracy
- Effective in water, polymer and mineral slurries
- Sitelink® Remote Technology
- Battery powered

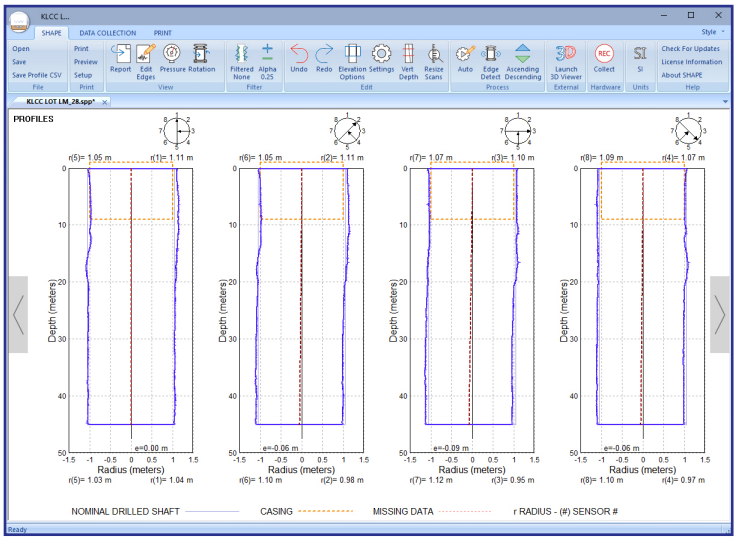
SHAPE's drilling stem advancement rate is approximately one (1) foot per second (0.3 m/sec), offering 360˚, 2D and 3D profile views.

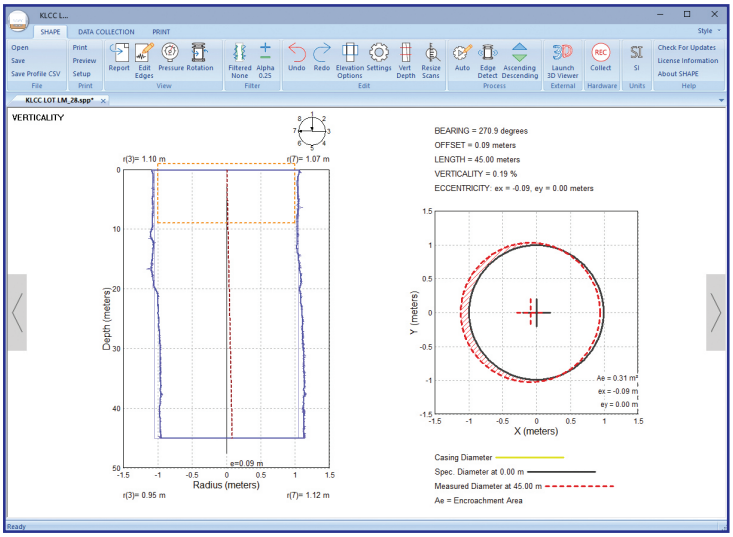
SHAPE® Data Collection Software

SHAPE® 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. The SHAPE® calculates the distance by measuring the wave speed in slurry at each measurement depth.





- 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

SHAPE® with Cable Connection

The SHAPE with Cable Connection can be deployed via winch system for data collection during testing. The connector cable provides real-time data during deployment for quick testing results.

www.pile.com/products/shape-2/