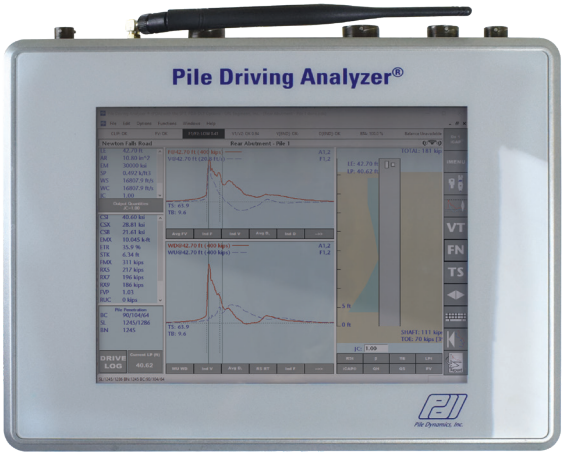
Pile Driving Analyzer®

Pile Driving Analyzer® (PDA-8G)

High strain dynamic load testing and pile driving monitoring system



Reliable. Efficient. Economic.

The Pile Driving Analyzer® (PDA) system is the **most widely employed** system for Dynamic Load Testing and Pile Driving Monitoring **in the world**. The PDA eighth generation (PDA-8G) acquires data from accelerometers and strain transducers attached to a pile or shaft so that High Strain Dynamic Tests (ASTM D4945) may be performed.

PDA-8G evaluates:

- Static Soil Resistance and Resistance Distribution
- Pile Structural Integrity
- Dynamic Pile Stresses
- Hammer Energy Transferred to the Pile

The PDA-8G is designed with the field engineer in mind. It can be connected to the accelerometers and strain transducers in wired or wireless mode. PDA-8G sensors are equipped with Smart Sensor technology which automatically detects which channel the various sensors are connected to and adjusts the channel with the appropriate signal conditioning and sensor calibration, avoiding possible errors in data collection. The 8G allows for up to 16 channels of data acquisition in wireless mode. The PDA-8G can also be used to colelct data in accordance with ASTM D7383 for Rapid Load Testing.

Pile Driving Monitoring

Pile Driving Monitoring helps establish the driving criterion and contributes to safe and economical production pile installation. The PDA-8G calculates for every hammer blow the static soil resistance at the time of testing (by Case Method and/or iCAP®, a real-time signal matching analysis), driving hammer performance, maximum driving stresses, and evaluates pile integrity. The high-speed wired PDA-8G data transmission allows testing at hammer operating blow-rates as high as 180 blows per minute, without loss of data.

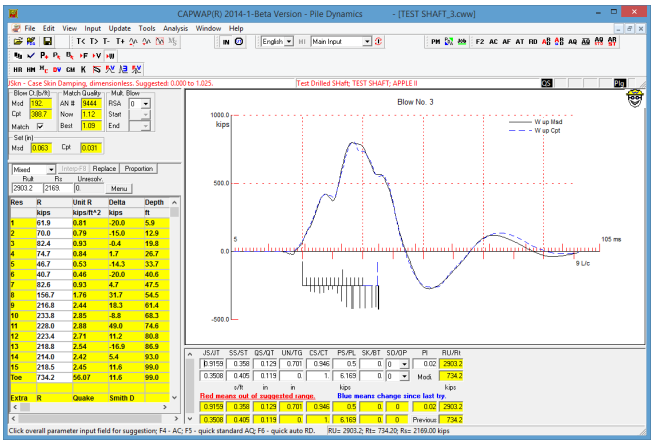
The real-time PDA-8G results can be complemented by analysis with the CAPWAP® signal matching software, for results that correlate very well with static load tests.

High Strain Dynamic Load Testing

High Strain Dynamic Load Tests may be performed with the PDA-8G on driven piles, drilled shafts, continuous flight auger piles, helical piles, or cast-in-situ piles. The tests require the impact of a pile driving hammer or a suitable guided drop weight.

PDA-DLT Software Add-On (optional)

The PDA-8G can be augmented with the powerful PDA-DLT software add-on, specifically designed to test drilled shafts (bored piles) and other cast-in-situ elements in an easy and efficient manner. The DLT add-on software streamlines data collection and analysis for drilled shafts testing, which unlike driven piles, typically involves a small number of blows with variable drop heights. The DLT add-on software efficiently addresses bored pile testing challenges including collecting data from a force top transducer while automatically calculating equivalent forces in the pile, allowing for multiple configurations of force measurement, automatic calculation of transfer energy ratio, direct drop height input by the user and convenient tabular output of all blows.



- Thin, light, ergonomic, with a rugged cast aluminum case
- Up to 8 channels of data acquisition in wired mode
- Up to 16 channels of data acquisition in wireless mode
- Universal data acquisition channels: either sensor type is compatible with any input channel
- Smart Sensors: automatic identification of the sensor type, serial number and calibration factor - no need for manual input
- High speed data transmission accommodates as high as 180 bpm hammer operating blow-rates without loss of data with a wired connection (and up to 120bpm with a wireless connection)
- Remote testing capability with field-to-office data transmission with SiteLink®
- All systems are equipped with a complete software suite including PDA-S, PDA-W, PDIPLOT2, PDI-CURVES, iCAP®, GRLWEAP14, and the powerful signal matching software CAPWAP®, which is considered the industry's golden standard
- Optional: Dynamic Load Tester (DLT) software add-on to streamline data collection and analysis of drilled foundations
- Optional: SPT software add-on with integrated report generation for SPT hammer energy measurements

Site Link®

SiteLink® Technology for Remote Testing

- A cost and time efficient alternate to traditional on-site testing
- Real time field to office data transmission via Internet
- Simple field setup

Choosing Four or Eight Channels

High Strain Dynamic Tests in most driven piles typically require only two strain transducers and two accelerometers installed near the top of the deep foundation element to obtain sufficient data. Thus, **four channels** of data acquisition are adequate for most driven pile tests.

However, **eight channels of data acquisition** (four strain transducers and up to four accelerometers), are highly recommended for dynamic load tests on a large diameter cast-in-place piles and certain types of driven piles.

Eight or more channels are essential when additional sensors are installed at multiple locations along the length of the foundation (for example, by embedding sensors near the toe of a concrete pile).

SPT Software Add-On (optional)

The PDA-8G can be used to determine energy transferred to SPT rods by SPT Hammers with the SPT Software Add-On. The optional SPT software add-on makes the PDA-8G fully compliant with the minimum digital sampling frequency requirements of ASTM D4633-10 (50 kHz) and EN ISO 22476-3:2005 (100 kHz), required for energy measurements during SPT testing.

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 or contact info@pile.com.

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