

RSM-PDT(D)

High-Strain Pile Bearing Tester



One Device, Two Uses. (PDA&PIT)

Application

- High strain Pile Bearing capacity detection
- Low strain pile integrity detection by reflected wave method
- Pile Driving Monitoring



CE certificate

RSM-PDT(D) High-Strain Pile Bearing Tester is mainly used for the testing of high strain bearing capacity of foundation piles, and is compatible with continuous pile driving monitoring and low strain integrity testing. The device is compatible with two test methods, economical and practical, has multiple functions, user-friendly, true and reliable data sampling.



– Technical Features



Precise Collection

Innovative instantaneous floating point amplification technology, with a large dynamic range and high signal-to-noise ratio, ensuring accurate acquisition of both strong and weak signals without distortion.

Equipped with three-dimensional correction functionality for shallow defects, ensuring precise defect location.



Automatic Strain Balancing

The strain bridge automatically adjusts for balance, reducing the impact of initial strain ring deformation on signal acquisition and eliminating signal zero drift. Performs real-time self-checks of the sensor installation status on-site.



Efficient Collection

Fast signal acquisition rhythm, capable of collecting signals at a rate of 60 blows per minute, allowing for real-time pile driving monitoring and testing.



Clear Results

On-site immediate display of Case Method analysis results, including F-ZV curves and upward and downward wave curves.



Industrial-Grade Capacitive Screen

Newly upgraded capacitive screen for smooth and precise operation, adaptable to various lighting conditions.



Newly Upgraded

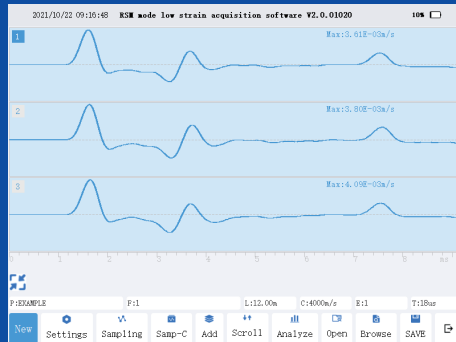
Engineered plastic ABS+PC. Flame retardant material, high temperature resistant design; IP65 Dustproof and waterproof design, fearless of the extreme.

– Specification

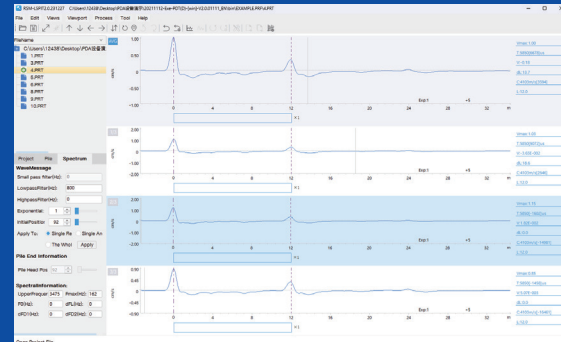
RSM-PDT[D]			
Display method	8.4-inch true-color LCD screen Resolution: 800×600 (adjustable backlight)	Frequency bandwidth	Speed channel: 2 ~ 12000Hz Strain channel: 0 ~ 12000Hz
Operation mode	Capacitive touch	Trigger level	Four-level selectable
Storage capacity	16G electronic hard disk	Number of channels	PDA: four channels PIT: one channel
Signal acquisition method	Wired	Sampling mode	2 accelerometers + 2 strain transducers
Data export method	USB	Sensor	Piezoelectric accelerometer strain transducer
Master control system	Low power embedded system Basic frequency ≥1GHz Memory: 512M	Power supply mode	Removable lithium battery Battery capacity: 12000mAh Battery thickness: 9mm Battery life: ≥10h
Sampling interval	PDA: 50 ~ 500μs adjustable in stages PIT: 5 ~ 1000μs continuously adjustable	Protection level	IP65
Floating point magnification	1 ~ 256	Shell	Engineering Plastic: ABS+PC
Recording length	1 k	Operating temperature	-20 ~ +55°C
A/D conversion accuracy	24-bit instantaneous floating point	Dimension	265×200×56 mm
System noise voltage	<20μV	Weight	2.0 kg (including lithium battery)
Dynamic range	≥100 dB		

RSM File Dynamic Testing Software

○ Low Strain Software



Low strain Sampling software interface

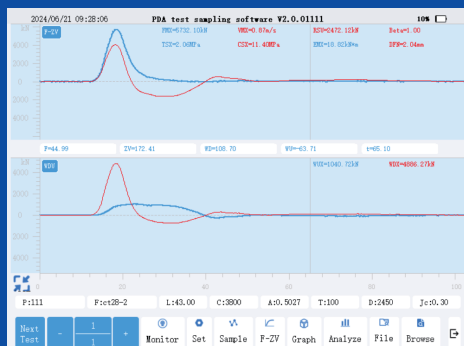


Low Strain Analysis software interface

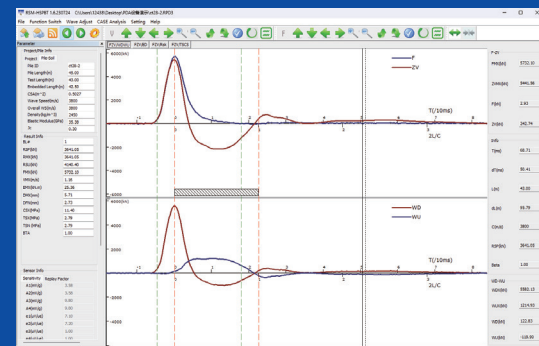
– Features

- ✓ Supports multi-channel signal acquisition and averaging analysis.
- ✓ The software supports powerful shortcut key operations, significantly improving work efficiency.
- ✓ Equipped with frequency domain analysis capabilities, facilitating quick and easy calculation of whole pile and defect frequencies.
- ✓ Features one-click analysis, enabling automatic interpretation of pile bottom position within a certain range.
- ✓ Analysis operations can be batch processed, saving workload on similar analysis tasks for the same type of piles.
- ✓ Allows for curve signal processing, including amplification, translation, rotation, filtering, and exponential amplification.
- ✓ Supports various report output styles, with selectable content. Output formats include images, printing, and documents.

○ High Strain Software



High Strain Sampling Software Interface

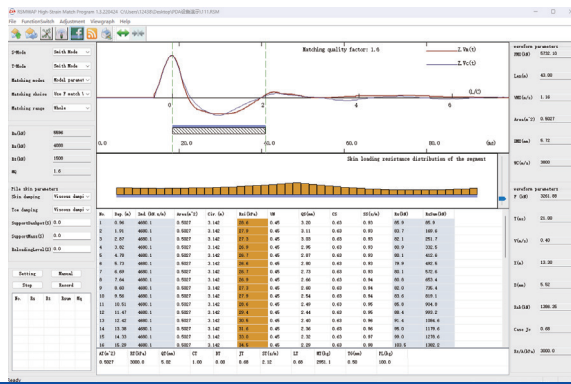


RSM-CASE Analysis Software Interface

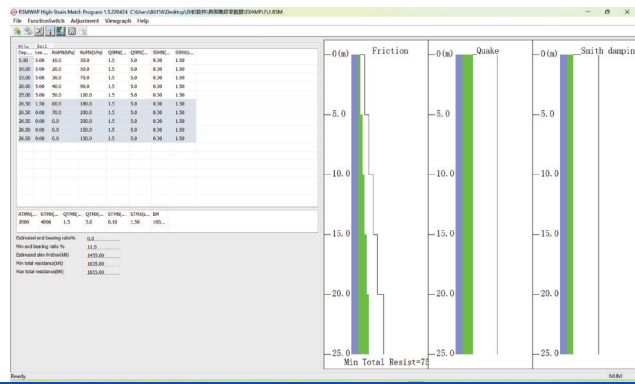
– Features

- ✓ Capable of conducting high strain bearing capacity tests on single piles using the CASE method and analyzing tensile and compressive stresses during pile driving monitoring.
- ✓ Allows for waveform signal processing, including amplification, translation, rotation, and filtering.
- ✓ Output content is customizable, supporting multiple output formats.
- ✓ Allows easy adjustment of the CASE damping coefficient to obtain different JC value calculation results.
- ✓ Offers various display modes for observation and analysis, including original curves, velocity curves, force curves, force-velocity curves, wave up and wave down curves, displacement-velocity curves, energy curves, and tensile-compressive stress curves.

○ RSM-WAP High Strain Fitting Analysis Software



RSM-WAP Fitting Analysis Software Interface



Soil Pile Model

– Features

- ✓ Capable of performing high strain bearing capacity tests on single piles using the fitting method.
- ✓ Can output simulated static load test curves and pile soil resistance distribution charts.
- ✓ Convenient and quick adjustment of fitting parameters, with a recommended parameter table provided to facilitate the quick mastering of fitting techniques.
- ✓ Both original and fitted calculation curves can be output in various modes.
- ✓ Multiple soil models are available, making it more suitable for various geological conditions.
- ✓ Complying with various international standards.