

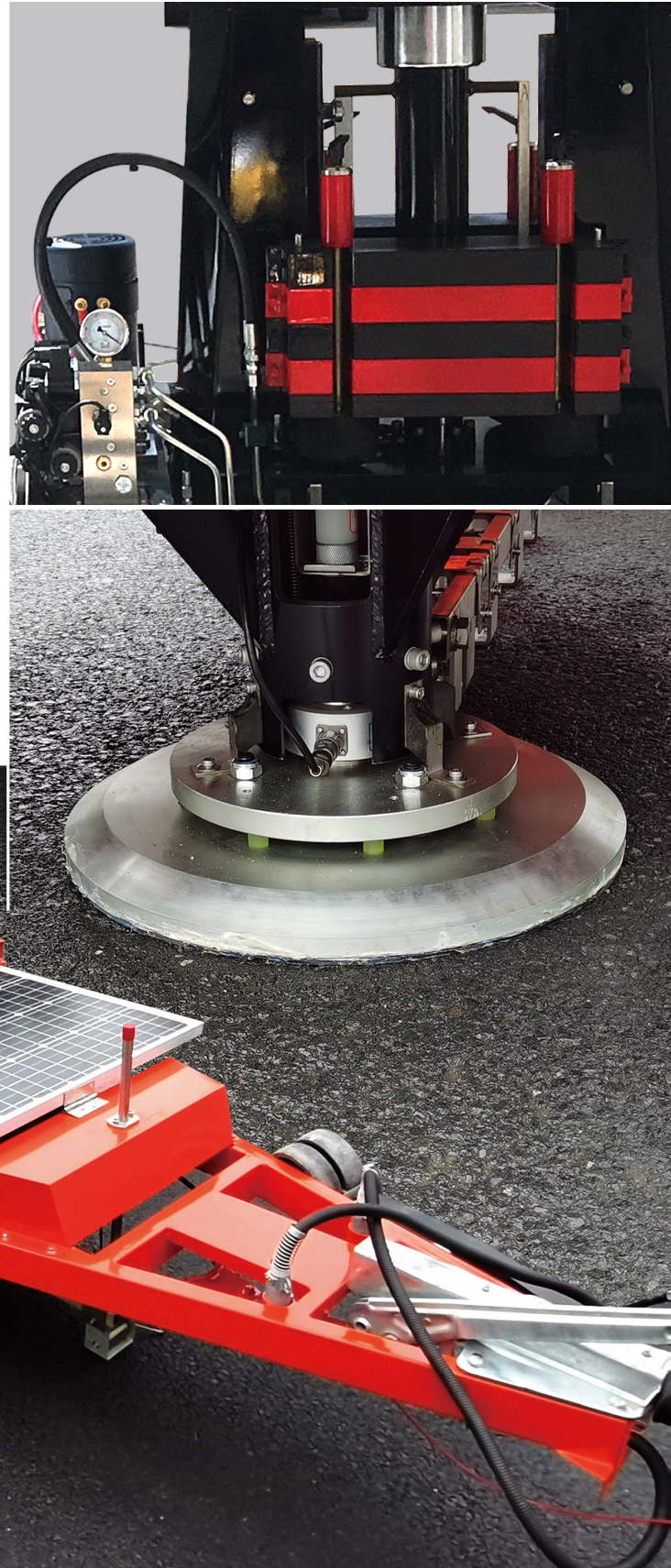
STANDARD: ASTM D4694-96
TRAILER TYPE / MULTI POINT

BEARING CAPACITY OF PAVEMENTS

It is important to check the quality of the pavements bearing capacity either if it is for roads, ports or airports. Does it match the design value and the load it is exposed to. If not the pavement will fail or suffer an accelerated deterioration. The consequences can be severe and costly over time and safety will be reduced. Knowledge of your pavements structural condition is important to observe in order to prevent the pavement of failing.

Falling Weight Deflectometer (FWD) is one of the most advanced non-destructive testing equipment of road surface strength in the world.

It has become a hot topic in the field of road in the world to measure dynamic deflection of road surface and calculate the rebound modulus of road surface.



FWD-2000

AUTOMATIC FALLING WEIGHT DEFLECTOMETER

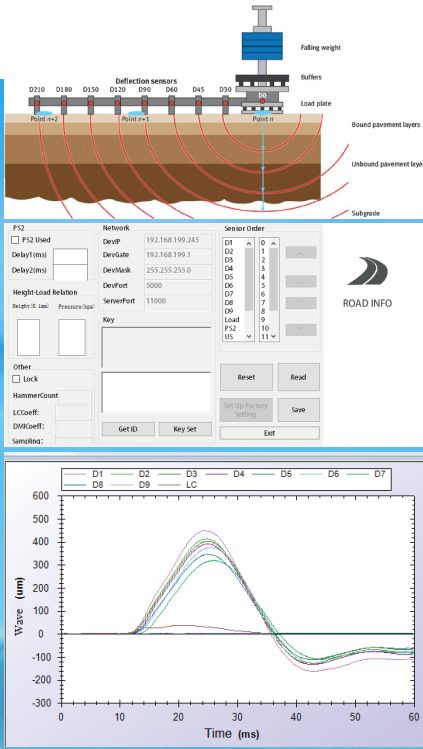
FEATURES

- ⊙ “One-Key Operation” The whole testing task can be completed by one single person with pressing just one key on laptop.
- ⊙ Strong and durable trailer base plate. We have used four-part plates to make better contact with the surface.
- ⊙ GPS location and temperature measurement (need to be ordered separately)
- ⊙ Auto capture of deflection value and load value.
- ⊙ Continuous outdoor working.
- ⊙ Storage Battery Charging: charging by electric generator on the tractor
- ⊙ Double Locking System: Hydraulic/ Mechanical
- ⊙ Emergency System: Lift the load plate when system breaks down.
- ⊙ Working status of load plate can be monitored on the screen.
- ⊙ Inertia Braking
- ⊙ Synchronized turn/break/back light and head warning light with the tractor



FWD-2000





TECHNICAL SPECIFICATIONS REQUIREMENTS

| ITEM | DESCRIPTION |
|-------------------------------------|--|
| System Configurations | Vehicle Factory fitted/configured |
| Operating Conditions | All weather/Weatherproof |
| Certifications | Provide factory compliant certificates: test and conformity certificates |
| Standards | Complies with ASTM D4694 - Standard Test Method for Deflections with a Falling-Weight-Type Impulse Load Device |
| Dimensions (excl of warning lights) | 4500x2000x2000mm |
| Weight | 450kg |
| Load range | 12-150kN |
| Load Pulse Duration | 20 – 30msec |
| Load Pulse Shape | Essentially half sine |
| Load pulse rise time | 10 – 15 msec |
| Load Cell Accuracy | 1% +/- 0.1kN |
| Load Resolution | 0.1kN (1KPa) |
| Load Plate | 4-split, 300mm, transverse for even loading |
| Sensor type | Seismic Velocity Transducer |
| Geophone Type | Digital (internal memory) |
| Number of geophones | 1-9pcs (optimum): 0.1 micron (standard configuration is 9 pcs) |
| Geophone accuracy | Better than 0.2% +/- 1 micron |
| Geophone resolution | 0.1 micron |
| Geophone range | 2200 micron |
| Geophone beam | 2500 micron from centre |
| Geophone beam Type | Self-Levelling beam with spring loaded holders for geophones for uneven ground |
| Geophone beam connectors | Fast plugs Connector on beam (easy to remove and connect) |
| Sensor Type | PT100 |
| Number of sensors | 3 automatic (air, surface, asphalt) |
| Temperature Accuracy | Better than 1% |
| Temperature Resolution | 0.1 C |
| Distance Meter Counter (Accuracy) | Better than 0.1% |
| System (Capacity) | Up to 65 test points per hour (depending on distance between test points) |
| Power Supply : | 12/24 VDC alternator |
| Testing Weights: | Weight plates no more than 25kg each (easy to configure) |
| Data Acquisition System | Digital geophones and load cell to prevent analog losses |
| Time history (real time) | |
| Simultaneous sampling (real time) | All channels, load cell, temp. and geophones |
| Resolution | 16 BIT on all channels (load, geophones, temperature, falling height) |
| Sampling | 25 kHz for all channels |
| Sampling period | 0-60 ms (chosen by user) |
| Data storage (peak value) | Local storage |
| Data storage (time history) | Local storage |
| Catch System : | Hydraulic Catch System |
| Calibration Standards | AASHTO R32 - Standard Practice for Calibrating the Load Cell and Deflection Sensors for a Falling Weight Deflectometer |