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| **PORTABLE FALLING DEFLECTOMETER**  **PORTABLE FALLING DEFLECTOMETER**   |  |  | | --- | --- | |  | **Name of the equipment:**  Portable Falling Deflectometer  **Make & Model:**  PRIMA 100 LWD  **I-Stem Registration ID-**  3220873  **Category of Instrument**  Characterization and Testing  **Types of Analysis / Testing**  To determine the deflection of pavements and assess pavement condition.  **Application:**  The PRIMA 100 is used to determine the deflection of pavements under load, typically in the context of road testing and evaluation.  **Description of Instrument**  The PRIMA 100 Light Falling Weight Deflectometer is a field measuring equipment consisting of a body, load plates, guide rod, drop weight, and geophones. |   **Booking Details**   |  |  | | --- | --- | | **Book through I-STEM:**  <https://www.istem.gov.in/>  **Slot Booking Link**  [I-STEM Slot Booking link for External User](https://www.istem.gov.in/equipment-info/20873/Portable-Falling-Weight-Deflectometer) | **Booking available for**  Internal and External Both  **Requisition form for**  [Internals](https://randc.nitc.ac.in/pdf/instruments/civil/CED-REQUISITION_FORM_Internal.pdf)  [Externals](https://randc.nitc.ac.in/pdf/instruments/civil/CED-REQUISITION_FORM_Internal.pdf) |  |  |  |  | | --- | --- | --- | | **Contact Details**  **Faculty In-charge:**  Dr. M. Sivakumar  **Email ID:**  [sivakumarm@nitc.ac.in](mailto:sivakumarm@nitc.ac.in)  **Phone number:**  0495-2286232 | **Technical Staff:**  Ajin Das C K  [ajindasck@nitc.ac.in](mailto:ajindasck@nitc.ac.in)  Abhiraj A R  [abhirajar@nitc.ac.in](mailto:abhirajar@nitc.ac.in)  Chandni P R  [chandnipr@nitc.ac.in](mailto:chandnipr@nitc.ac.in) | **Department**  CED  **Office Email ID**  [cedoffice@nitc.ac.in](mailto:cedoffice@nitc.ac.in)  **Location**  Transportation Laboratory  **Lab Phone No.**  0495-2286243 |   **Features, Working Principle and Specifications**  **Type of Sample Required for Analysis / Testing (Quantity, Pre-Preparation, State etc.) Guidelines for Sample Submission – User Instructions**   |  |  | | --- | --- | | **Features of the equipment**   * Unique technology: Based on 30+ years of experience * Wireless data collection: With Bluetooth antenna and PDA * Advanced user setup: Customizable to suit specific needs * Calibration: Easy to calibrate and verify * Data collection: With 1-3 geophones, exportable to spreadsheet | **Unique features/Measurement capabilities, if any**   * Impact depth measurements * Measurement with 3 geophones * Data export to spreadsheet * Wireless data collection | | **Instrument Technical Description and Major Specifications (This Specifications Limited to Major 5)**   * Main components: Body with geophone housing, load cell, and electronics box * Load plates: Ø100 mm and Ø300 mm * Drop weight: 10 kg * Guide rod: With release handle and buffers * Power supply: Rechargeable batteries * Communication: Bluetooth connectivity for wireless data transfer | **Measurement/Sample specifications:**   * Impact depth: On various surfaces * Stress dependency: Measures stress dependency on different surfaces * Drop height: Allows selection of drop height for accurate measurements * Frequency: Measures frequency of impact * Amplitude: Measures amplitude of impact |  |  | | --- | | * Sample type: Pavement surfaces (asphalt, concrete, etc.) * Sample size: Variable, depending on measurement requirements * Preparation: None, but surface must be clean and dry * State: In-situ measurement, no need for laboratory preparation * Submission guidelines: Measure on-site, using PRIMA 100 device   **User Charges Rs. (GST Extra)** |  |  |  |  |  | | --- | --- | --- | --- | | **Internal** | **External Academic Institutes** | **National R&D Lab** | **Industry** | | 5000/- per test | 5000/- per test | 10000/- per test | 15000/- per test | |