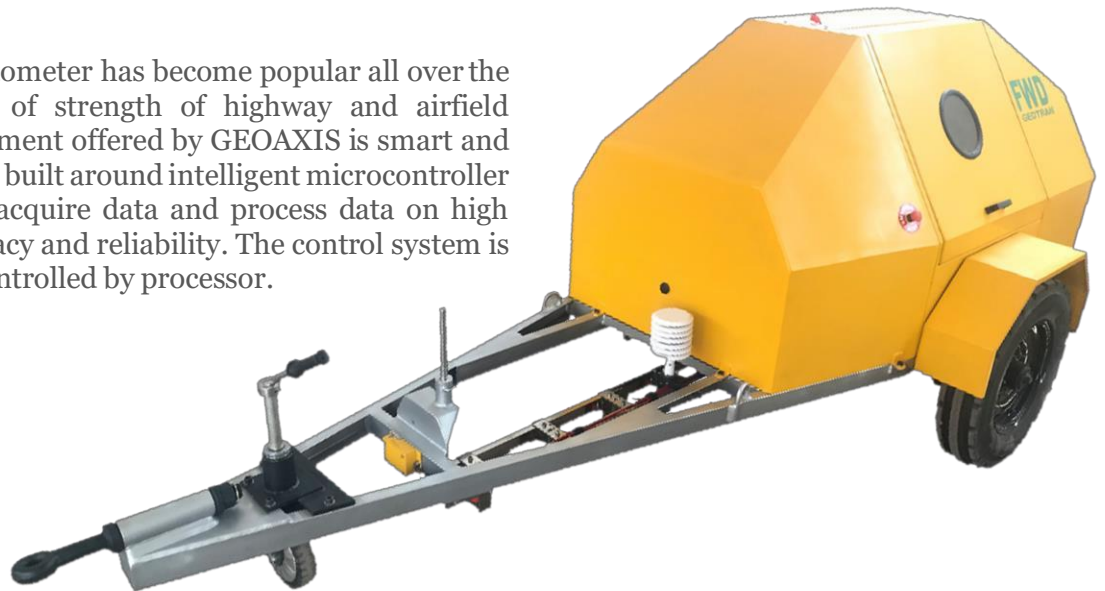


GeoAxis

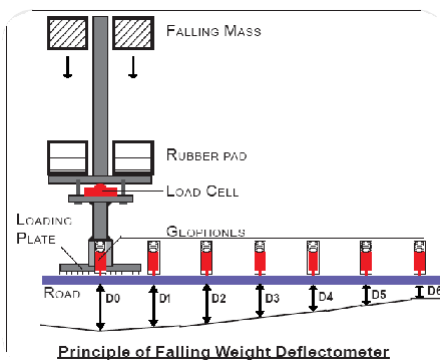
GFWD (GEOAXIS Falling Weight Deflectometer)

Falling Weight Deflectometer has become popular all over the world for evaluation of strength of highway and airfield pavements. The equipment offered by GEOAXIS is smart and fully automatic system built around intelligent microcontroller based system which, acquire data and process data on high speed with high accuracy and reliability. The control system is fully automatic and controlled by processor.



The equipment can be used for the analysis and design of new and rehabilitated flexible and rigid pavements, void detection in P.C.C. pavements. The GFWD (GEOAXIS Falling Weight Deflectometer) creates impulse load on the pavement by dropping a mass from a variable height upon rubber buffer system. When a mass is allowed to fall from a fixed height, the resulting force transmitted to the pavement through a circular load plate of 300mm diameter. It will be within 3% of the average applied loads in different drops and the force pulse is close to the shape of a half sine wave with a peak force in the range of 20 to 75 kN.

The geophones measure surface deflections using 7 sensors with a resolution of 1 micron. Air and pavement temperatures are measured before measuring deflections. For pavement temperature probe touches the road surface and temperature measurement is done by system itself.



GEOAXIS FWD is fully automated and requires only **one man operation**. In in-built model vehicle need not be running for measuring pavement deflections, necessary power is supplied by battery provided with FWD. The unit is provided with user friendly **window based software** for data analysis and parameter calculations.

GEOAXIS FWD is considered to be the most appropriate since it simulates the short duration loading of a moving wheel. Since six or more deflections are measured by the FWD, it is possible to explain the structural behavior of pavements more accurately. The deflections measured by the FWD can be used for back-calculating the pavement layer modulus, which in turn, can be used for the analysis and estimation of the remaining life of the pavement and for determination of the requirement for overlay.

The following characteristics can be determined using FWD Data

- a) Modulus of each layer.
- b) Overall stiffness of the pavement system.
- c) Load transfer efficiency of P.C.C. (Portland Cement Concrete) pavement joint.
- d) Modulus of sub-grade reaction.

Falling Weight Deflectometer Technical Specification

Model	GFWD-T (Trailer mounted) GFWD-V (Vehicle mounted)
Operation	Fully Automatic. All operation through Laptop/Tab
Impact Load	75 kN (Max.) Load Resolution: 0.01 kN
Load Sensor	100 kN
Loading Impact Plate	300mm diameter and 31 mm thick with reinforced checkered rubber (solid/segmented)
Impact Height	4 to 40 Cm (Software adjustable)
Impact Weight	Min 100 kg (as Standard), max 400 kg (add weight 25 kg to each side) plate along with a universal hinge at the upper part of plate to ensure that the loading plate align itself as per the camber of the road
GPS and Distance Measuring Unit	Integrated GPS (Latitude, Longitude and Altitude) and distance measuring unit
Geophone	7 nos. (for deflection measurement) Deflection Resolution: 0.001mm (1 micron)
Temperature Sensor	2 nos. One each for air & road surface temperature.
Data Acquisition	Laptop with High speed Data Acquisition System , acquire data of geophones, load, temperature and GPS etc.
Software	GEOAXIS FWD Analysis software <ul style="list-style-type: none"> ▪ Easy operation. ▪ Graphical presentation of captured data of geophones, load cell.
Operating System	Window XP/7/8/10
Back Calculation	KGP back 4-layer and 3-layer/ BAFAA
Supply	48 Volt Battery, chargeable from AC mains (external source)
Power backup	6 to 7 hours continues operation with one full charge of battery

Extra accessories if required:

- Increase no.of geophone at extra cost
 - Relative Calibration jig at extra cost
 - Loading Impact Plate at extra cost
 - Geophones at extra cost
 - Load Cell at extra cost
 - Neoprene Rubber Buffer at extra cost
 - Hard Checkered plate at extra cost
- (One set of Neoprene Rubber Buffer and Hard Checkered plate will be supplied along with the unit as spare)



For more information feel free to write us or call us:

AXIS TECHNOLOGIES INDIA
 5, JAIN MARKET, ST. JUDE'S CHOWK, SHIMLA BYPASS ROAD,
 SEWLA KALA, DEHRADUN-248001, (UTTARAKHAND) INDIA
 Email: axislabindia@gmail.com, www.axislabindia.com, PHONE: +91-9410777791