



## EXPLANATION SHEET DMT – FLAT PLATE DILATOMETER

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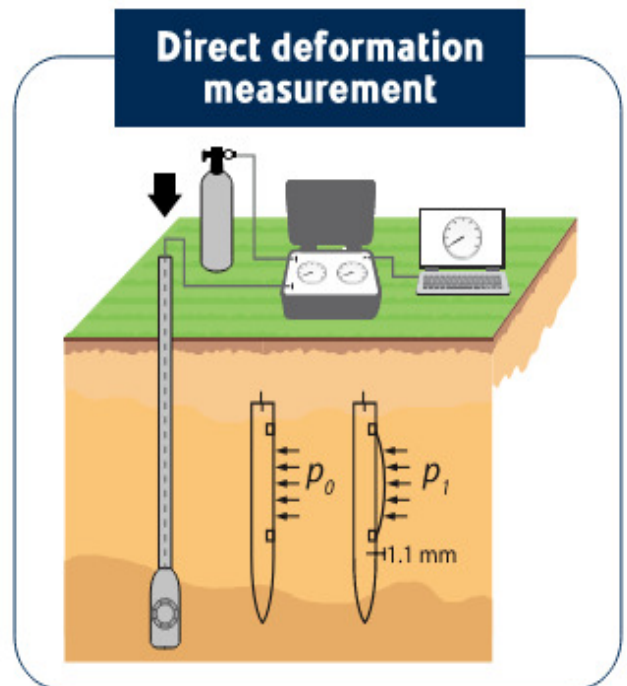


The **Flat Dilatometer (DMT)** is an **in situ test** for the determination of various key soil parameters used for geotechnical design. The test is rapid, accurate, simple and cost-effective. The results are highly repeatable and **independent from the operator**. The blade may be advanced with any field machine, including penetrometers and drill rigs. **DMT** measurements are performed in situ, directly on the soil in its original position and state. This eliminates the disturbance caused by drilling, sampling and transport to laboratory. The profiles of the **results are available real time during test execution**. The direct measurement of soil deformation enables accurate estimations of the elastic modulus. The  $K_p$  parameter provides stress history information of the soil, a very difficult property to assess with other testing methods.

### Main Applications

- Soil stratigraphy
- Stress history (OCR,  $K_0$ )
- Settlement prediction
- Soil Improvement quantification
- Slip surface detection in clayey slopes
- P-y curves for laterally loaded piles
- Liquefaction potential
- Permeability in clay
- FEM input parameters (ex. Plaxis)
- Subgrade modulus for pavements
- Subgrade modulus for diaphragm walls

### Direct deformation measurement



**For completeness see the separate Explanation Sheets regarding the Medusa DMT and Seismic DMT systems also operated by IGS.**