



reducing geotechnical uncertainty

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DATA SHEET

OUR IN SITU TEST 'MENU'

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CPT & CPTu & SCPTu

10cm²(C10) piezo-cones and non-piezo-cones.
 15cm²(S15) piezo & non-piezo subtraction-cones.
 15cm² (C15) Seismic CPT (Vertek)
 100MPa 25MPa 10MPa capacities.

We offer a range of 'Test Types', from routine CPT & CPTu testing (IGS-1) to special-type and quasi-research testing. You choose.



Our cones are all supplied by Geomil OR Vertek and are of very high quality and repeatability.

We frequently calibrate every cone in-house to achieve best possible precision, especially in the lower ranges. All our cones exceed the highest category of the ISO Standard 22476-1, Application Class 1.

For C10 piezo-cones we offer the usual U2 piezo-location, also the U1 piezo-location for better response in 'difficult' soils. Just ask!

Tee Bar

100cm² full-flow Tee-Bar penetrometer.

64cm² full-flow Tee-Bar penetrometer.

A penetrometer developed specifically for strength determination of soft to very soft clay.



The Tee-Bar was developed by UWA, NGI and others to reduce uncertainty in very soft clay testing.

Corrections are basically eliminated, and N_{T-bar} has a smaller range than N_{kt} for a CPT test.

**For projects where very reliable shear strength parameters in soft clay are important T-bar should be done in addition to CPTu'.*

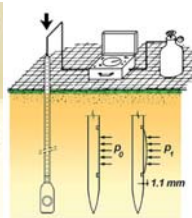
**quote - Lunne, Randolph, et al*

DMT - Dilatometer

For determination of modulus, strength, and other engineering parameters of soil.

Can be used with or without the seismic module described below.

Can be used overwater, even from a non-jack-up barge.



Developed by Professor Silvano Marchetti in the late 1970s.

Our most popular test type after CPT.

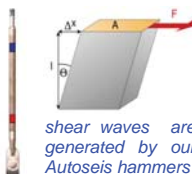
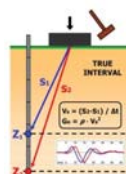
The diaphragm is calibrated on-site before and after every test profile.

Some experts believe this is the best way to determine modulus in situ.

SDMT - Seismic Dilatometer

For determination of shear wave velocity in a continuous vertical profile.

Can be used with or without the DMT module described above.



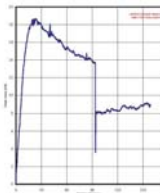
Developed into a useful and user-friendly tool by Diego Marchetti over the last 8 years or so.

At IGS we see this tool as the best way to obtain in situ shear wave velocity (hence low strain shear modulus G_0).

Vane Shear

The classic in situ shear strength test for very soft to stiff clays. Corrections may apply.

Often chosen by our clients to help determine N_{kt} from CPT. We always advise caution.



At IGS we offer three different vane sizes 50x100, 75x150 & 100x200. With these we can get meaningful data in virtual ooze up to firm-stiff clays.

Our PLC-controlled vane is computer-logged, has speed control, and measures both peak and residual strength.

In addition to the testing outlined above, we also install standpipes and piezometers, and we offer 8 different in situ sampling techniques. Sampling methods are described on a separate Data Sheet.