

# GVT-100

Electrical vane tester

**Geomil**  
equipment

*World's first manufacturer  
of CPT equipment*



The Geomil Equipment GVT-100 field vane tester is a sophisticated PLC controlled device with a high precision torque sensor. The testing procedure and data acquisition are fully software controlled.

With a nominal torque of 100 Nm, all standard vanes can be applied allowing for the determination of the undrained shear strength of cohesive soils.

The rotational speed can be adjusted from 0.1 °/s up to 20 °/s, while the sampling rate can be user defined between 0.1 Hz to 10 Hz. The logging and control software communicates with the PLC and allows for the various user inputs.

In line with the latest standards, the control software provides options for the following automated test procedures:

- vane test to obtain undrained shear strength ( $S_u$ )
- remoulding to obtain residual shear strength ( $c_{res,v}$ )
- subsequent vane test to obtain remoulded shear strength value ( $c_{rv}$ )

The measured values are displayed in real-time, both numerical and graphical, whereby the actual torque is plotted against the rotation angle or time.

Simultaneously all measured data and the test variables are logged in a separate ASCII file, which is then used as input for further processing in an Excel spreadsheet.

The purpose-built spreadsheet allows plotting of the vane test results such as rotation angle, shear strength and remoulded conditions. The use of a standard spreadsheet offers the user a great deal of flexibility.

The GVT-100 comes with two standard rectangular vanes (100 x 50 mm and 150 x 75 mm respectively), which are both default inputs in the processing spreadsheet. Other vane sizes can be used as well and the different dimensions can be input while processing.

The GVT-100 is designed for the use of CPT tubes as actuating and extension rods, with casing tubes acting as friction reducer. A special protection shoe on the toe of the casing tubes protects the vane while it is advanced into the subsoil. The use of standard CPT equipment reduces investment cost for current users.

Main characteristics of the GVT-100:

- PLC controlled
- rotational speed adjustable 0.1 °/s to 20 °/s
- standard and custom vanes can be applied

Other options:

- adapters for standard (STD), heavy (HVY) and speedlock (SPL) threaded CPT tubes
- slip coupling (SPL only)

For more technical information or a quotation based on your specific requirements please contact [sales@geomil.com](mailto:sales@geomil.com) or call us at +31 172 427 800.



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