

GeoPAC[®] : Auto-Controlled Pressuremeter

MÉNARD PRESSIOMETER TEST ACCORDING TO THE EN ISO 22476-4 STANDARD

GeoPAC

What is GeoPAC[®] ?

Following in the footsteps of Louis Ménard, Apageo proposes an exclusive device: **GeoPAC[®]**, the Auto-Controlled pressuremeter, driven by **GeoBOX[®]**. GeoPAC[®], such as its predecessor the Ménard Pressuremeter, allows Ménard pressuremeter test according to the EN ISO 22476-4 standard. It is the first equipment **totally automatic and autonomous** on the market that manages all the different steps of the test, ordered by the operator. GeoPAC[®] makes the whole process **easier to conduct** for the operator, **reinforces the reliability** of the results, and **reduces the time** of preparation.



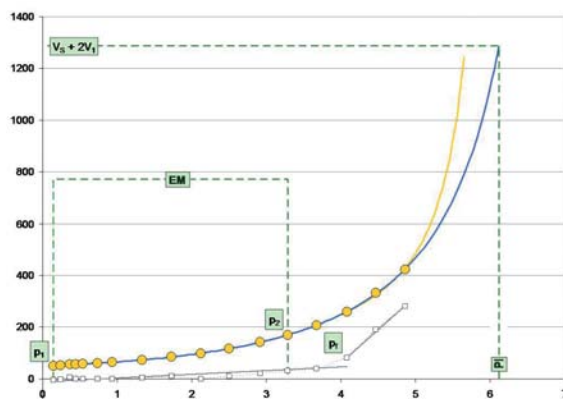
What makes GeoPAC[®] being so original?

The ingenuity of the system lays on the physical separation of the 2 circuits necessary to pressuremeter test: Gas and water (exclusive system, never seen on the market). Thanks to this technology on the water circuit, the accuracy on water regulation is nonpareil.

GeoPAC[®] specifications

- | | |
|------------------------------------|--|
| ▪ Dimensions : 1000 * 380 * 340 mm | ▪ Max. gas pressure : 70bars |
| ▪ Weight : 45kg (empty) | ▪ Power supply : 9 - 18VDC |
| ▪ Handle for transport and wheels | ▪ Volumeter capacity : Roughly 1200cm ³ |

Ménard Pressuremeter test

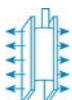


A pressuremeter test is an in situ controlled loading test performed on the wall of a borehole using a cylindrical probe that expands radially. From the test readings (volume variation based on controlled pressure), a stress-strain curve can be obtained for the soil at hand in the case of plane deformation.

Testing enables definition of three parameters:

- Ménard pressuremeter modulus (EM)
- Creep pressure (Pf)
- Limit pressure (PI)

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Implementation



1. The borehole is drilled so as to minimize wall disturbance and maintain a cavity diameter compatible with the probe size (63 or 76 mm).
2. In accordance to the principle of Ménard Pressuremeter test, GeoPAC[®] executes pressure and volume loss processes, ordered by GeoBOX[®].
As soon as the probe is lowered into the borehole to the required test depth, the operator enters parameters of the test in GeoBOX[®] (pressure of 1st pressure stage etc...) which order the test execution in WIFI to GeoPAC[®]. From now, it manages by its own the expansion and deflation of the probe. Pressure increments and pressure lag settings are also automated.
3. During the entire process, GeoBOX[®] offers a monitoring of the pending test on its screen (real time view of the results, progression, line graph etc...). At any time, the operator can decide to stop the test from GeoBOX[®].

When the test is over, data are saved on GeoBOX[®] (no time limit, max. 500 tests). Results can be printed directly on GeoBOX[®] printer, saved on a USB key or sent to the office via a GPRS system (option).



Test treatment

Test can be transferred via a USB key into our geotechnical data processing software GeoVision[®].

