



The Geomil Equipment Orca-Deep Water (DW) is the latest development of the successful Orca downhole CPT tool. The Orca is a versatile and fully integrated Cone Penetration Testing (CPT) testing and sampling system for downhole use and is designed to be combined with several existing drilling methods. The Orca DW is able to operate in water depths of up to 3000m while still providing real time data. The system is pressurized by water, making it environmentally friendly by omitting the need for hydraulic oil.

The Orca DW is deployed as a wireline or an umbilical operated tool and allows CPT and soil sampling to be conducted intermittently. After completion of a CPT or soil sampling, drilling can be advanced to the next test depth. Penetration length measurements are accurate from the Orca thanks to a downhole depth encoder.

The CPT data can be received in real-time if the unit is used in umbilical mode and a backup is kept in the cone for reduced risk. The tool utilizes a narrow data-wireline umbilical that not only ensures excellent communication at depth but has an outside diameter of only 16 mm allowing the use of smaller winches than traditional downhole systems. The real time data transfer allows for safe use of the 3m stroke, while maintaining reduced risk of equipment loss, increasing productivity.



Due to the modular nature of the Orca it is a quick process to switch between CPT and sampling as well as changing from wireline to umbilical operation.

Orca DW tooling consists of:

- Orca-CPT, the tool to perform CPT tests
1.50 m and 3.00 m stroke version is available
- Orca-PST, the piston sampler tool, for high quality sampling in soft soil conditions
($\varnothing = 3''$ or 85 mm, L = 1.00 m)
- Orca-PSH, the push sampler tool, suitable for window sampling where the Orca-PST would be too delicate ($\varnothing = 3''$ or 100 mm, L = 1.00 m)

Optional supporting items:

- CT winch, incl. Orca-umbilical and termination
- Umbilical sheave
- Orca data control box
- High pressure pump

Suitable drill systems and sizes:

- API 6 $\frac{5}{8}''$ FH
- Geobor S (or equivalent)
- API 4 $\frac{1}{2}''$ IF

Alternative sizes can be accommodated when technically feasible.

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