



Geotechnical Equipment: geoROV™ Seabed CPT and Sampling System



geoROV™ is the comprehensive seabed Cone Penetration Test (CPT) and sampling system. It is designed to mount quickly and easily onto a standard work-class ROV or trencher. It may also be deployed from its own stand-alone frame.

Applications include geotechnical route survey, trenching support, subsea structure mudmat and skirt design, scour monitoring and pipeline free-span inspection.

geoROV™ uses the proven concept of a standard fixed-rod 5cm² CPT for testing seabed properties in the upper 3 to 5m. In addition to conventional piezocone CPT testing, geoROV™ can also take one metre length samples from the seabed using a range of state-of-the-art sampling techniques: piston samples, liner samples, and push samples.

If required, advanced tests such as pore-pressure dissipation monitoring and T-bar measurements can readily be performed by the tool. Additional seabed in-situ testing sensors are also available on request.

geoROV™ system provides its users with a highly cost-effective opportunity to obtain the absolute best quality of seabed geotechnical measurement and sampling in all water depths and a very wide range of soil conditions.

Key Features

- Mounts readily to most work class ROV's.
- 15kN geoROV™ drive unit and depth encoder.
- Subsea data acquisition module.
- RS232 communication cable to ROV.
- Full ROV interface package included.
- Cone cable management system minimises risk of slack or entanglement.
- Available light-duty suction anchor system to boost ROV seabed reaction.
- Available stand-alone seabed deployment frame for non-ROV operations.
- Topside laptop computer runs geoROV™ acquisition and processing software.

Sensor and Tool Specifications

Cone type: Standard digital 5cm² piezocone CPT

Sample type: 75 to 100mm diameter piston, liner and push samplers

Additional sensors: Available upon request.

CPT Penetration depth: Standard 3m (extendable to 5m)

Sampling Penetration depth: 1m

Water depth: 2,500m

Hydraulic and electric power: Provided by ROV

Real-time data acquisition: via RS232 link

Drive unit dimensions: 360x300x340mm

Push / pull thrust force: Up to 15kN

Tool package weight: In air 55kg, 40kg submerged