



## 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 5cm<sup>2</sup> 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 5cm<sup>2</sup> 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