

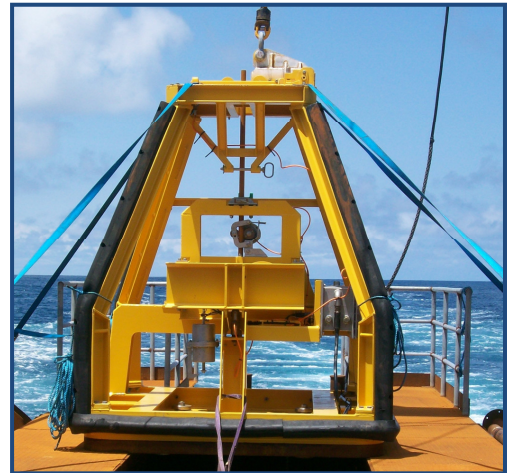
### Coastline Surveys Ltd C-Pen<sup>40</sup>

The A P Van den Berg Roson seabed CPT system is designed for performing in situ soil testing in water depths up to 2,000m

The system can perform Piezocone CPT's using cones from 5 to 15cm<sup>2</sup>, T-bar or ball penetrometer tests, and dissipation tests all to depths of up to 30m below the seabed depending on ground conditions.

All testing is carried out in full accordance with the latest international specifications and standards for in situ testing.

The unit comes complete with a constant tension winch and dedicated power/signal umbilical. The control system (frequency inverter) for the CPT is held in the surface winch thus keeping the subsea unit as simple as possible.



A CPT is based on pushing an instrumented cone into the ground at a constant speed of 2cm/sec, with continuous measurement of the cone end resistance, the friction along the sleeve of the cone, and the pore water pressure. These measurements make it possible to accurately determine the ground conditions and stratigraphy over the penetrated depth.

Cones	5, 10, 15 cm <sup>2</sup> Piezocone Analogue subtraction
Rods	25 or 36mm diameter
Sensors	Base inclination Total thrust
Thrust Capacity	25kN – 1 wheel drive 25mm rod 40kN – 1 wheel drive 36mm rod 75kN – 2 wheel drive 36mm rod
Dimension	2.0x2.0x2.7m(h)+ mast height
Weight (air)	Variable 3000-9000kg
Penetration	Currently max 10m although 30m possible in soft soil
Water depth	2,000m (current umbilical 1,500m)
Winch and Control Unit	2.2x2.2x2.25m(h) 4,000 kg 80m/min