



a.p. van den berg



BATTERY-POWERED

Cone penetration testing with the ROSON

Features:

- Accurate and reliable
- Up to 50 metres testing on one charge
- All functions integrated in one system
- Suitable for 2, 5 or 10 cm² cones

Battery-powered cone penetration testing with the ROSON

Description

The subsea automated control unit in a watertight cabinet is placed on the ROSON subsea frame. It contains all that is necessary to operate the subsea CPT unit. It is also capable of communicating with the surface unit on deck by means of an acoustic data transmission link (one way at the time) or a modem bypass cable (full duplex).

The system consists of

- Battery pack capable of 10 CPT's of 5 metres length with the 40 kN unit and 7 CPT's with the 100 kN unit
- Frequency inverter to drive the ROSON thrust unit
- 16 bit data acquisition system for the cone and total load measurements
- Data memory for at least 10 CPT's of 5 metres length.
- Data can be read through the modem or the bypass cable into the surface unit
- Control logic to perform automated CPT's to pre-set limits
- Driver for Benthos acoustic modem
- RS485 connection to work with a bypass cable when conditions do not allow for the acoustic data modem transmission

Manage your ROSON system independently of an umbilical

We reserve the right to change specifications without prior notice.
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The surface control and data storage unit contains:

- Touch-screen computer with GORILLA! CPT software
- Control functions for the subsea unit through the acoustic modem
- Drive for the Benthos acoustic modem
- Programming facilities for the subsea unit
- Control functions through the optional bypass cable (strongly recommended for reading data stored in the subsea unit)

Communication between subsea and surface unit by:

- Benthos acoustic modem capable of 2400 baud bi-directional MFKS HADAMART communication
- Bypass cable to 1200 metres when ocean conditions do not allow use of the modem system

Accessories

A specially designed battery charger maintains and verifies battery integrity of each individual unit.

Experience the quality of a 16 bit data acquisition system! No more need for 2 tons cones in soft soil.

- In a 12 bit DA system the measuring range is divided in 4096 parts. Resolution for the cone tip resistance will be $100/4096 \approx 0.0244$ MPa.
- In a 16 bit DA system the measuring range is divided in 65536 parts. Resolution for the cone tip resistance will be $100/65536 \approx 0.00153$ MPa.

*While a 2 tons cone improves the resolution by a factor 5, the 16 bit DA system improves the resolution by a **factor 16**.*

We are proud that cones and DA systems made by A.P. van den Berg meet these challenges!



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A.P. van den Berg Machinefabriek B.V.

IJzerweg 4, P.O. Box 68
8440 AB Heerenveen, The Netherlands
Phone +31 (0)513 63 13 55
Fax +31 (0)513 63 12 12
E-mail info@apvandenber.com
www.apvandenber.com

A.P. Van den Berg, Inc.

P.O. Box 654, 109 Greenwood Circle
Milford, PA 18337 USA
Phone +1 570 296 8224
Fax +1 570 296 4886
E-mail apvandenber@ptd.net