



a.p. van den berg
The CPT factory

WISON-APB-1000

wireline CPT system with 1,000 m depth rating



features

- proven wire line CPT system with a pushing force of 50, 100 or 150 kN
- water depth + drilling depth up to 1,000 m, CPT stroke up to 3 m
- suitable for 5, 10 and 15 cm² Icones
- Bottom Hole Assembly for multi-tooling
- suitable for soil sampling with the Push or Piston Sampler
- remote-controlled and electrical constant tensioning winch
- software for realtime data acquisition and control

creating tools that move your business

WISON-APB-1000, wireline CPT system with 1,000 m depth rating



introduction

The WISON-APB system is basically a double-acting cylinder with the soil-testing instrument attached to the end of the piston rod. An umbilical is released from a remote-controlled and electrically driven constant tension winch on deck of the geotechnical drilling vessel and provides for 2-way

data transfer, electric power and hydraulic power to the tool.

designed for depths up to 1,000 m

The WISON-APB-1000 is capable of performing CPTs and taking soil samples at depths up to 1,000 m (water depth + drilling depth). It requires a drill string with an inner diameter of at least 4" (101,6 mm) and a drill tower clearance of 11 m. Its pushing tool is available in three versions: each with its own pushing capacity, length and stroke. The WISON-APB-1000 comes with an electric winch that is self-tensioning for heave compensation. The winch allows the tool to travel at a maximum speed of 2 m per sec inside the drill string.

digital Icone data acquisition system

The WISON-APB works in conjunction with A.P. van den Berg's digital Icone data acquisition system, consisting of the Icontrol and Icones. It enables measurement of cone resistance (q_c), local friction (f_s), pore water pressure (u) and inclination (l_x/y). The Icone is easily extendable with click-on modules to measure other than the four standard parameters. The modules Conductivity, Magneto, Vane and Seismic are available for the WISON-APB-1000.

soil sampling with Push or Piston Sampler

Sampling with the Push Sampler is performed by pressing a sample tube into the soil and retrieving it. With the advanced Piston Sampler the sample is guided by a piston and secured by an optional core catcher contributing to a higher recovery ratio. Both samplers can also be used with a hardened cutting shoe for an improved recovery ratio.

Bottom Hole Assembly for multi-tooling

A.P. van den Berg has a dedicated Bottom Hole Assembly (BHA) to hold the WISON-APB-1000 tools. The WISON-APB tools can also be used with a BHA for multi-tooling. We cooperate with different partners to guarantee proper fitting of our tools with for example the S-Geobor system from Atlas Copco.

| Specifications tools | WISON-APB 50 kN | WISON-APB 100 kN | WISON-APB 150 kN |
|--------------------------------------|--|------------------|------------------|
| Pushing force | 50 kN | 100 kN | 150 kN |
| Stroke length | 3,000 mm | 3,000 mm | 1,600 mm |
| Total tool length | 9,000 mm | 5,430 mm | 8,030 mm |
| Largest overall diameter | | 90 mm | |
| Minimal drill string ID | | 4" (101.6 mm) | |
| Specifications CPT en sampling | | | |
| Icone sizes / type | Icone 5 cm ² , 10 cm ² / CPT or CPTU | | |
| Icone modules | Vane, Seismic, Conductivity & Magneto | | |
| Sample / tube length | 895 mm / 995 mm | | |
| Specifications self tensioning winch | | | |
| Dimensions (l x w x h) | 2,000 x 2,600 x 2,180 mm | | |
| Power supply | 50 kVA | | |
| Winch drum capacity | 1,200 m | | |
| Drum dimensions (inner x outer) | ø 1,220 mm x ø 1,900 mm | | |
| Total weight | 6,600 kg | | |
| Winch max speed | 2 m/sec | | |
| Umbilical Safe Working Load | 20 kN | | |



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