



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 cm<sup>2</sup> 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 ( $I_x/I_y$ ). 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	1,000 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 <sup>2</sup> , 10 cm <sup>2</sup> / 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)	∅ 1,220 mm x ∅ 1,900 mm
Total weight	6,600 kg
Winch max speed	2 m/sec
Umbilical Safe Working Load	20 kN



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