



WISON-APB

wireline CPT equipment for water depth up to 550 m



overview

- 150 kN type with 1.6 m stroke, 100 kN type with 1 m stroke or 50 kN type with 3 m stroke
- winch with an umbilical and hydraulic power pack
- remote control for operating the winch
- depth encoder with measuring cylinder for the penetration depth measuring
- sheave block for the guidance of the umbilical through the drill tower

WISON-APB, wireline CPT equipment

description



The WISON-APB is, in a simplified form, a double acting cylinder with a cone, a WIVATAP vane tester or WIPUSAP soil sampler attached to the piston rod. An umbilical is attached to the WISON-APB for the power supply, the data transmission and the hydraulics from the winch. The WISON-APB is lowered into a drill string by paying out the umbilical on the winch. At the end of the drill string, a latching ring is mounted, suitable for all WISON-APB types. The WISON-APB pushes against this ring during the CPT test by means of four latching jaws.

At the end of the stroke (the end of the CPT-test) the latching mechanism releases and the self-tensioning system on the winch will lift the WISON-APB back to the surface. The piston rod is pushed back to starting position by means of a water pump, mounted on the winch frame, before it can be used for the next test.



the winch

The winch is remote controlled, this makes the WISON-APB very easy to operate during testing. Most of the time a small lab is used for the data acquisition system and therefore it is very convenient to have the control of the WISON-APB system next to the data acquisition system.



parameters and data acquisition

The WISON-APB enables measurement of cone tip resistance, local friction, pore-water pressure, penetration depth. If required vane testing, seismic testing and soil sampling can be added. A 16-bit digicone-based data acquisition system is built into the waterhead, that is connected to the computer on board by means of a Golog-WISON-APB interface on deck. Communication between the interface and the PC goes through two wires, six extra wires are used for seismic and vane testing.

Protection against seawater	
Cylinder	stainless steel
Rods	hardchrome plated 100 μ
Others	stainless steel or seawater resistant brass

Technical data	WISON-APB 50 kN	WISON-APB 100 kN	WISON-APB 150 kN
Penetration downthrust	50 kN	100 kN	150 kN
Hydraulic cylinder working pressure	17,5 MPa	35 MPa	30 MPa
Stroke length	3000 mm	1000 mm	1600 mm
Dimensions	WISON-APB 50 kN	WISON-APB 100 kN	WISON 150 kN
Total length including waterhead connection	8550 mm	4550 mm	5750 mm
Largest overall diameter	90 mm		
Cylinder diameters exterior/interior	85 / 70 mm		
Rod diameters exterior/interior	35 / 16 mm		

Self tensioning winch	
Dimensions	2200 x 2200 x 2250 mm
Electric power	20 KVA
Umbilical length	600 m
Total weight	3850 kg

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