



BHC1000 | Digital Hydrophone String

The BHC digital hydrophone string is designed for efficient recording P-waves in boreholes down to 1000 m for seismic tomographic surveys. High-resolution P-wave tomographic investigations between boreholes are routinely applied for the exploration of development sites considered for larger building projects, e.g. power stations, dams or high-rise buildings or can be used for nuclear and CO2 storage monitoring, geothermal projects and mining exploration. The hydrophone string BHC1000 is a fully digitized borehole tool and consists of a downhole digitization unit, 24 hydrophones moulded to a multicore cable, the BHC1000 surface unit and acquisition software. The BHC1000 runs on a standard 4-conductor logging cable. The communication is made via a RS485 interface.



BHC1000 digitization unit with 24 hydrophones and surface unit.

Technical Details

Downhole Unit

Hydrophone sensor: SQ54
Pre-Amplification: 4x
Operational depth: Up to 1000 m
Number of hydrophones: 24
Max. pressure: 100 bar
Temperature range: 0-70 °C
Digitizer length: 70 cm
Digitizer diameter: 57 mm
Borehole diameter: Min. 70 mm
Depth indicator: Via logging winch
Signal transmission: 4-conductor cable
Cable head: GO-4
A/D conversion: 24 bit
Sampling frequencies: 250-48000 Hz
Trace length: 65000 samples

Surface Unit

Power: 12 V DC
Weight: 3kg
Communication: 2 wire RS-485
Downhole electronics: DSP = Blackfin 548, 64 MB SDRAM
Trigger: Piezo, switch, TTL
Auxiliary channel: 4

Data Example

The record shows a crosshole data example with a shot depth of 252 m and receivers placed between 276 and 230 m depth.

