

AQUALOCK SOIL SAMPLER

FEEL THE SONIC VIBES !
Make your difficult works successful



Main applications :

» Geotechnical investigation and construction

Cost efficient and high quality sampling to large depth. Perfect for mixed layers geology, but also for off-shore drilling.

» Environmental drilling

Accurate and fast localization of impermeable layers, Description of undisturbed soil profile and sub samples for physical and chemical analysis, also adapted to polluted soil investigation.

» Mineral exploration

Highly productive soil sampling in mixed geology with accurate layer thickness and sample composition.

» Dewatering / Well installation / Geothermal drilling

Extremely rapid soil profiling followed by, if required, well-installation.

» Archaeological sampling

Rapid sampling of a large area in a dense grid on archaeological remains.

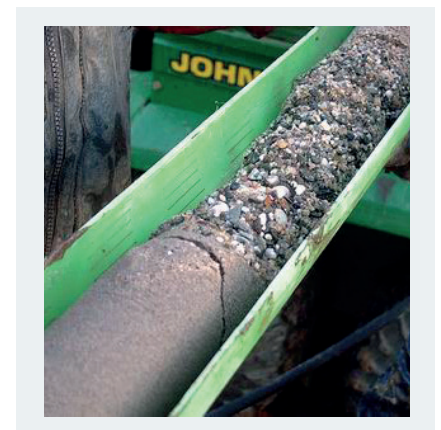


How does it work :

Before drilling, the AquaLock is filled with water, which locks the piston below in the cutting shoe.

Vibrating it down, the AquaLock stays empty until you decide to take a sample. You unlock the piston by lowering push-rods through the drill pipe, which opens the valve on top of the AquaLock, allowing the piston to move freely and take an undisturbed sample.

After sampling the spring push rod is removed allowing the valve to close, which creates a vacuum that holds the sample during retrieval of the AquaLock sampler. Once retrieved, you apply high pressure water behind the piston for sample extraction. The piston also prevents any contact between the sample and the water.



ACQUALOCK SOIL SAMPLER

Technical specifications (patented equipment)

Aqualock	50	70	100
Ø Sample x Length (mm)	2 000 à 3 000	2 000 à 3 000	2 000 à 3 000
Ø ID cutting shoe (standard, options) (mm)	48 , 46, 44, 42, 46	66 , 64, 65	96 , 92, 96
Ø ID. Tungstene carbide coring ring	48 (with synthetic or stainless corelifter)	66 (with synthetic or stainless corelifter)	96 (with stainless corelifter)
Drill rods	GP63	GP88/3"	GP100 tr
Overriding with casing (option)	GP100 (77 x 1 000 mm)	5,5" (142 x 107 mm)	6,5/8" (127 x 168 mm)
Ø Overall diameter and body length	70 mm 2 346 / 3 346 mm	92 mm 2 629 / 3 629 mm	120 mm 2 629 / 3 629 mm

Liners available for all diameters

Do you need ?

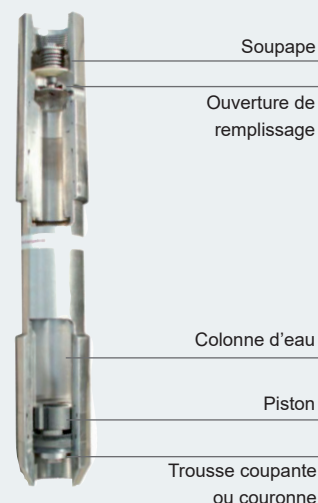


- High quality samples from desired depth ?
- High production rate ?
- High quality samples of mixed layers ?
- High recovery of undisturbed samples, even in alluvial deposits ?

The solution

The patented Aqualock, can be described as a thin wall piston sampler adapted to sonic drilling with unique features:

- Fastest and most reliable sampling technique for alluvial formations
- High quality long core samples in a matter of minutes
- Piston valve-operated
- Vacuum keeps core in place
- Piston also used to extrude samples
- Continuous sampling or discreet sampling without casing



REFERENCE PROJECT

John Rae, Géologue - Colombie

« The AquaLock gives us much better samples than any technique we used before. Days of traditional drilling with an expensive geologist waiting for low quality samples are now compressed in only a few hours with everybody happy and satisfied. A 30 meter deep profile is retrieved, examined and packed for analysis before the first morning coffee break. »



PILOT PROJECT

In order to prove the efficiency of this method, a team can come on site to carry out a difficult and/or target work. For more information or personal advice, please contact us.