

Environmental Exploration

High quality samples with sonic drilling technology



Environmental exploration

Why do you need sonic:

- Highest quality samples/cores in the drilling world
- Fantastic production in drilling footage
- No cuttings or waste
- Little use of drilling fluids in most conditions
- Small package for difficult access
- Lower cost per data point or core sample
- Safe due to ease of rod handling and general methods
- Relatively quiet operation
- Diverse use with many applications and market areas

Your challenge

Getting high quality samples without cross contamination isn't easy. Contamination often spreads to other layers or to the surface. This brings health risks and high costs to solve this problem. Accurate samples from desired depth are often hard to obtain. Slow advancement of the drill results in your field specialists wasting their time. Because of poor engineering data due to bad sample quality, health and safety risks may well stay unrecognised.

Our answer

Our Sonic drill rigs, together with our special soil samplers and rock coring tools have proven to produce the correct data in short time. Samples are long, show accurate depth information and are highly undisturbed. Taking water samples using water well systems is easy with our sonic lost cone technique. Our Sonic drill rigs produce clean boreholes and keep your jobsite clean. The stunning drilling speed, low sound level and ergonomically balanced operation make that people like working with our Sonic rigs and smart sampling tools. We produce our rigs and tooling according to detailed and demanding EU standards.



We supply

- Complete sonic rigs that vibrate down samplers to depths exceeding 200 meters.
- AquaLock core samplers that can rapidly produce beautiful samples of wet sands, clay, peat, etc.
- CoreBarrel systems for sampling all other formations, including weathered rock.
- DualWall CoreBarrel systems with an annular for flushing without contacting the sample, to core (rock-) formations.
- Casing systems for telescopic purposes.
- All tooling and consumables to work with these samplers and CoreBarrels.
- Highly skilled staff to train your people to work with this equipment at your jobsite, wherever on the globe.
- Auxiliary equipment e.g. service vehicles, rod and casing racks, grouting and drill fluid treatment systems.
- Pre-packed monitoring wells.
- Injection lances for in-situ injection.



Sampling mixed layers

Do you need to take samples in wet sands or in a profile with mixed layers? Our patented AquaLock sampler system can handle it all. It is the fastest and most reliable sampling tool for alluvial deposits in combination with a Sonic drill head. You can use the AquaLock for continuous sampling or discreet sampling.

Drillers reach optimum drilling speeds by adjusting the frequency of vibration to the natural frequency of the soil. Efficiently penetrating the formation, sonic drills can consistently obtain close to 100% sample recovery.

Sampling hard formations

With other formations than sand, loam, peat or clay, our CoreBarrel is the right choice. You combine vibration with rotation to allow the Tungsten carbide buttoned ring bits to cut through the harder formations. The DualWall CoreBarrel is designed to take cores from rock and very hard layers and can be cased with a 6⁵/₈" or 7" casing.



Volatile Organic Compounds (VOC's)

Our sonic drills are frequently used for environmental or geo-environmental investigations of highly polluted sites. These projects include nuclear licensed sites, petro-chemical works and petrol stations. The sonic drilling method can easily be adapted to change drilling procedures or methodology. And very important: with sonic drilling you can achieve up to 70% less waste on site!

In-situ remedial injection

Eijkelpamp SonicSampDrill has designed a top-down and bottom-up injection tool that allows injection of remedial compounds at specific target intervals. Our drilling rigs can also be used for installation of injection filters, injection hoses and thermal remediation equipment.

Smart Wells

The assemblation of filter parts and filter sand in a traditional monitoring well system is time spending. With Sonic Drilling, you can install the SmartWell through the inside of the drill casing because of use of lost cone. SmartWells will bring more efficiency in the installation process, bentonite and filtersand are prepacked around the monitoring well. This prevents them from getting stuck inside the casing. SonicSampDrill offers five types of SmartWells: Standard monitoring Well, Direct Well, Zero Diffusion Well, Multichannel Wells and Quality wells.



Reference projects

Maarten Gerritsen, VCMi Drachten, The Netherlands:

'Eijkelkamp SonicSampDrill has exactly the right knowledge. They are always willing to think and help us and our clients out when we have to drill in difficult circumstances. They are always available when there are technical problems: you can call them day and night. Eijkelkamp SonicSampDrill knows the demands of the environmental market and they are willing and able to think further.

Their drilling technique is up to four times faster than any other technique. It makes it easier and faster to drill through complicated soil layers. With sonic drilling we get less and less excessive pollution during our activities. We don't need as much working water any more. Thanks to AquaLock, we can take better and undisturbed samples in less time.'



Frank Zhu, Beijing Geological Bureau, China:

'On the site of our test base, the expert-group inspected the working progress seriously and they enquired in detail of the construction reference. The expert-group gave full affirmation to sonic drilling applied to our CMT well construction and regarded sonic drilling as an ideal technology for the CMT well construction.

It is reported: sonic drilling is an internationally-recognized new generation technology. It is the combination of high frequency, rotation and crowd force.

The test base was jointly built by Beijing Geological Bureau, CIGEM, CHEGS and Beijing University with the purpose of making an on-the-spot investigation to sonic drilling applied to a CMT well construction. The success provided the proper technology for the hole-drilling and the well installation for future large scale CMT well constructions. It has important practical significance.'

Let us carry out your pilot projects!

Eijkelkamp SonicSampDrill is also your professional and reliable partner for carrying out pilot projects. For more information or personal advice please contact our sales department.

Eijkelkamp
SonicSampDrill

Uitmaat 8
6987 ER Giesbeek
The Netherlands

T +31 313 880 201
E info@sonicsampdrill.com
I sonicsampdrill.com