

Geotechnical drilling

Fast and reliable with Sonic technology



Why do you need Sonic:

- **Fast drilling and sampling in any geology**
- **Compact rigs to drill in spaces with limited access**
- **Reliable results**
- **Low sound level and ergonomically balanced operation**
- **Option to combine with Standard Penetration Test (SPT)**
- **Option for monitoring while drilling for unique information**
- **Option to combine with Eijkelkamp GeoPoint SoilSolutions CPT equipment and solutions**

Your challenge

Geotechnical investigations are mostly conducted in difficult circumstances. Sampling results are often not very reliable and drilling takes a lot of valuable time. Drilling in cities requires fast and compact technology with minimal disturbance for the inhabitants.

Our answer

Our CompactSonic drill rigs, in combination with our special soil and rock coring tools, have proven to produce the correct data in short time. Samples are long, show accurate geological information and show virtually no disturbance. They are the perfect base for accurate geotechnical profiling and reliable laboratory analysis.

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

Rigs that vibrate down samplers to depths exceeding 400 meters.

AquaLock core samplers that can rapidly produce perfect samples of wet sands, clay, peat, etc.

CoreBarrel systems for telescopic sampling of all other formations, including weathered rock.

Dual Wall CoreBarrel systems to core (rock-) formations that require cooling of the coring bit.

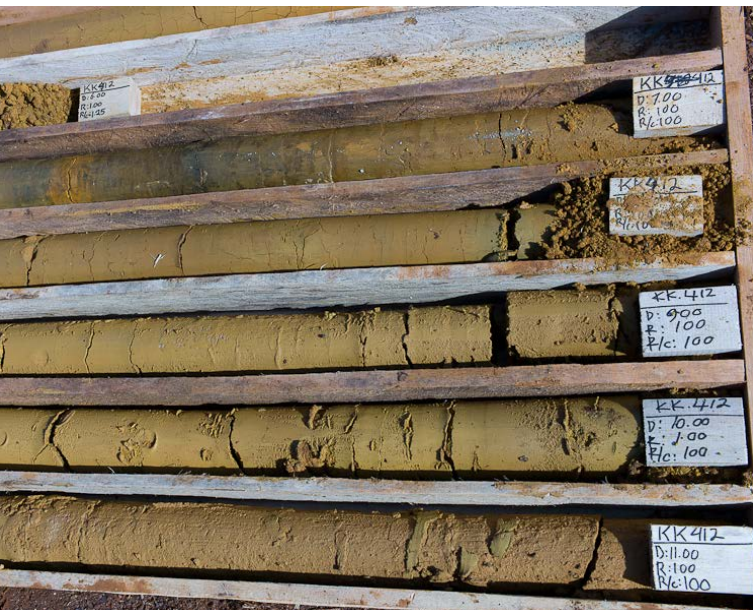
Casing to work with these samplers and CoreBarrels.

Tooling for destructive drilling.

Eijkelkamp Geopoint SoilSolutions **CPT equipment and solutions.**

SPT auto drop hammers to switch from sonic drilling to standard penetration testing. The SPT hammer can also be used for splitspoon sampling, shelly tube sampling and Akkerman sampling.

Monitoring while drilling package with telemetric reporting.



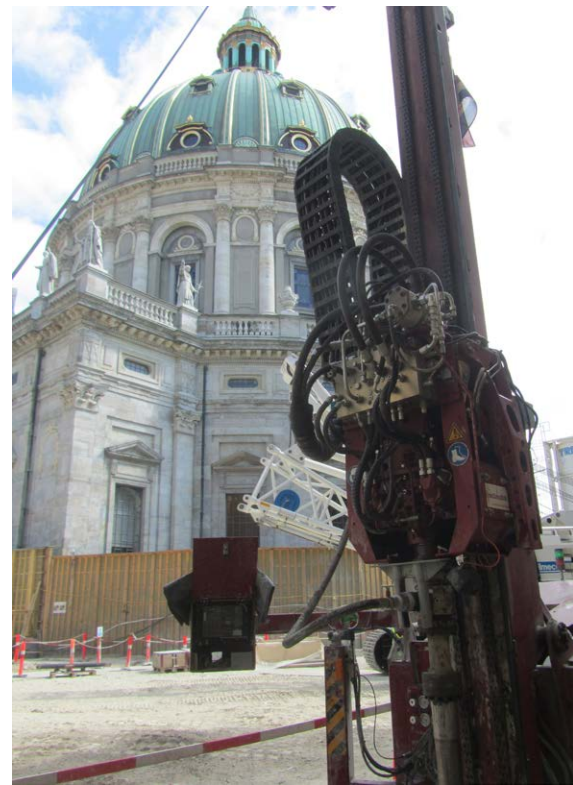
Staff to teach your people how to work with this equipment or to carry out a pilot project.

Logistic solutions to make sure the equipment is in the right place at the right time.

Coring mixed layers

Do you need to take samples in wet sands or in a geology with mixed layers? The AquaLock can handle it all. It will even take samples from an unsaturated layer. You can use it for continuous sampling, or you can take your sample only at the depth you desire (discrete 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 in alluvial-, mixed- and hard formations, particularly when operated by a seasoned drill crew. For this reason, we supply extensive training with every sonic drill rig we deliver.



Sonic combined with SPT

The standard penetration test (SPT) is an in-situ dynamic penetration test, designed to provide information on the geotechnical engineering properties of soil. The test procedure is described in the British standard BS EN ISO 22476-3, ASTM D1586 and Australian Standards AS 1289.6.3.1. The main purpose of the test is to provide an indication of the relative density of granular deposits, such as sands and gravels from which it is virtually impossible to obtain undisturbed samples. You can perform SPT testing through the sonic casing in virgin soil.

Well installation

With Sonic equipment, the drilling speed can be up to 4 times higher than with conventional drills. The use of casing and lost cone creates a very effective drilling process, that can minimize your waste by at least 70% compared to conventional drilling methods. With sonic you can drill through cobbles, boulders, hard layers or lenses. Even in heaving sand formations, perfect installation is still possible.



Reference projects

Gennady Voronovitch, Geocentr, Russia:

'All drilling work was conducted with our CompactSonic drilling machine of Eijkelkamp SonicSampDrill, which we have installed on our self-leveling floating platform 'Geocentre-Sonic'. The use of the CompactSonic with the AquaLock core barrel system made it possible to perform all various assignments using one single machine, and the client was astonished about our production speed and quality. They even came on board to see with their own eyes why the use of the sonic technique works so much faster and more accurate. As a result we are in an very good position to win additional assignments, leaving the competition virtually without a chance.'



Russel Sherwin, ProDrill, New Zealand:

'Gravels, cobbles, sands, silts and standard penetration testing at 1.5 meter intervals, 100% core recovery and turn a profit using HQ triple tube coring. It was this next to impossible challenge that faced Pro-Drill (Auckland) Ltd in quake devastated Christchurch New Zealand. Innovative thinking and the introduction of SonicSampDrill RotoSonic Drill Systems is setting the standards in the biggest Geotechnical drilling programs in the world at present.

Our evaluation

Wire line coring

Core Recovery: 40%

Below ground wear: extremely high

Production: 15 meters a day average

Sonic Coring

100%

Low

Up to 10m/hrs

Apart from normal programmed hydraulic filter replacement on the rigs (4 rigs), we have experienced no reliability issues what so ever (first rig approx 9500 meters cored).

Many thanks Eijkelkamp SonicSampDrill for making it easy after 40 years in the geotechnical drilling business.'

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.