

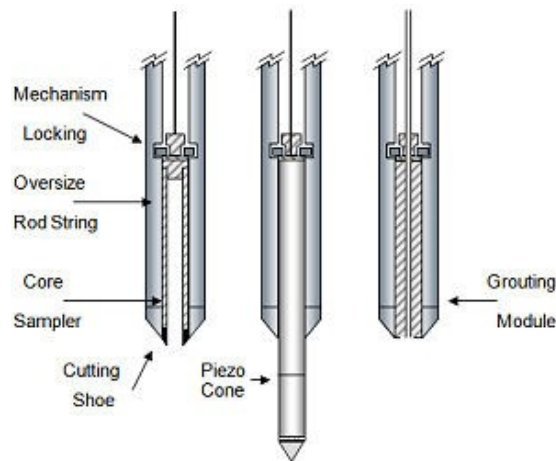
Soil Sampling

Soil sampling capabilities

Lankelma Inc operates several different CPT soil samplers. Lankelma's high soil sampling production rate using a direct push method often surprises clients. In many instances, by the time the client has a sample bagged, Lankelma's operators have already retrieved another.

(USA, imperial measurements)

CPT Soil Sampler® : Vertek developed a soil sampler for Lankelma Inc based on extensive field experience with other types of samplers. This more robust sampler can handle the large resultant push force imposed by Lankelma Inc's heavy CPT trucks. The split spoons are 21 inches long with an inner diameter of 1.4 inches. This particular sampler can achieve a 42 inch sample in certain soils by combining two sampler modules.



Wireline sampler

Advantages

The production rate of direct push soil samples are competitive when compared to conventional drilling techniques. When CPT data is available, the number of samples required is often reduced.

- Drilling waste is virtually eliminated, resulting in significant hazardous disposal waste cost savings.
- Designed for use specifically with heavy CPT trucks, Lankelma's soil sampler can retrieve samples deeper than other CPT soil samplers.
- A simple design provides easy and reliable decontamination, providing assurance of sample quality.
- Lankelma Inc's soil sampler is designed for quick assembly/disassembly for high productivity.

see next page

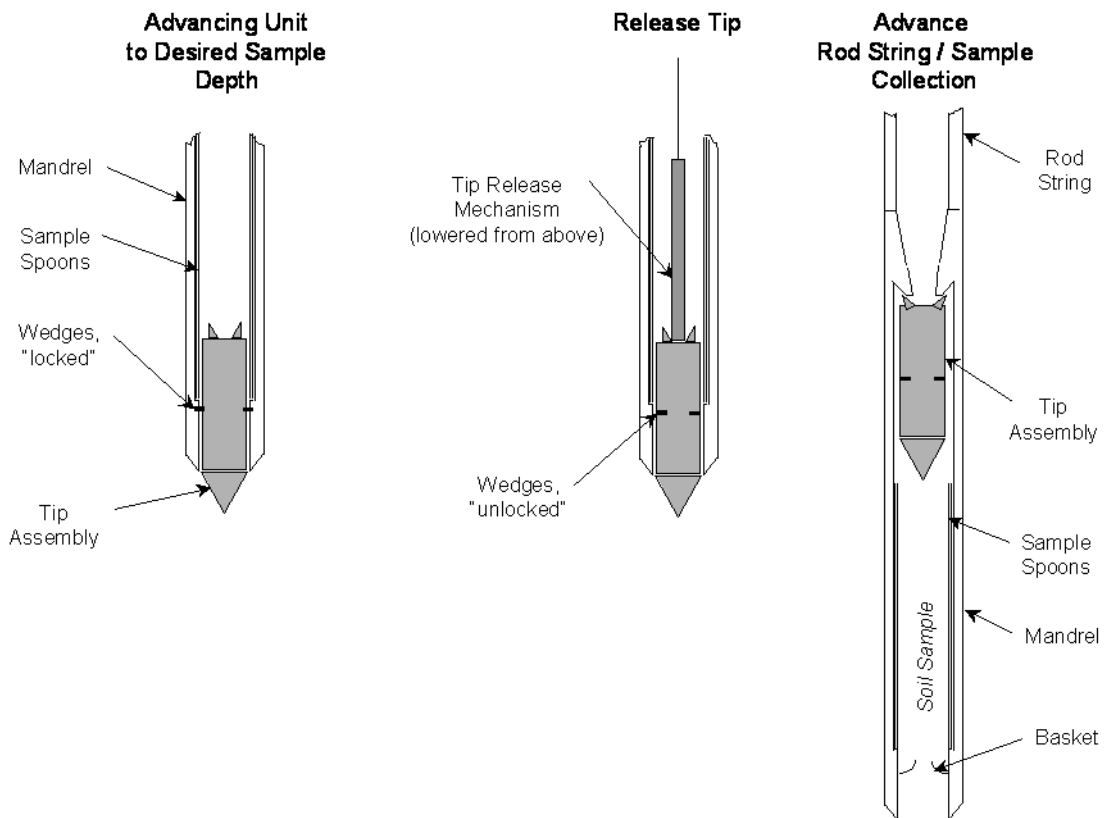
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MOSTAP® : This soil sampler was designed for use in soft to medium stiff soils. Lankelma has used this sampler in a variety of clays, sands, and silt materials to obtain soil samples. The split spoons are 20 inches long with an inner diameter of 1.4 inches. Limited to soil type, a 5 foot sample can be taken using a special adapter using a “sock”, rather than split spoons.

Lankelma has modified the MOSTAP® sampler so that a slight vacuum can be drawn on the sample. This modification is only used on loose sands below the water table that are notoriously difficult to sample. The slight vacuum assists in retaining the sands in the soil sampler.

Gouda® : If smaller samples are acceptable, then ARA uses the Gouda® sampler, which obtains 95 cc samples. The Gouda® sampler's main advantage is that it is more robust than the MOSTAP®.

CPT soil sampler



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