



“The quality class of sample needed to conform to the client’s testing requirements should dictate the category of sample used” (BS5930:2015 Ch20.1). The length to diameter ratio needs to be less than 1:20 to conform.

The U100 Series comprises several components which depending on their selection provides class 1, 2 & 3 samples in accordance with BS EN ISO 22475-1 and Eurocode 7.

In fine soils undisturbed sampling is often practicable using the following tooling to allow samples to be taken for testing strength and stiffness. The three types of sampling systems are as follows:

- U100 Standard system (OS-TK/W)
- U100 Plastic liner system (OS-TK/W)
- U100T System (OS-T/W)

Full details, see over.

## Applications

- Geotechnical investigation
- Environmental investigation

## Features

- Air valve to retain sample
- Reduces sample disturbance
- Threaded body for easy removal
- Thin wall increases sample quality to Class 1
- Use of cutting shoe reduces damage on sample

## Accessories

- Caps
- Wax
- See also: Piston Sampler and Pagani Class 1 sampler

## U100 Standard system (OS-TK/W)

Expected Class in accordance with BS EN ISO 22475-1:2006 and Eurocode 7:

- Soft to firm CLAY Class 2 – 3\*
- Stiff to Very Stiff CLAY Class 2 – 3\*
- SILT Class 3
- SANDS and GRAVEL with catcher Class 4

\* Reduced to Class 4 if water is added to the borehole

It is designed for taking samples in clay and other soft formations. Can be used in all fine soils of stiffer or lower consistency and extremely weak or very weak rock such as chalk, mudstone, and Mercia mudstone.

The sample tubes are each 18" long and are driven into the ground using a sliding hammer with U100 drive head (bell housing). The drive head contains a ball valve to allow air to be released from the upper part of the sample tube as it is being driven into the ground.

Consists of aluminium or cadmium-plated steel sample tubes, an optional core catcher and a case-hardened drive shoe. The drive shoes can be supplied with either a plain or serrated edge. Plastic push-on caps or screw-on aluminium caps can be provided for the sample tubes and a special sealing wax for long-term storage.

## U100 Plastic liner system (OS-TK/W)

Expected Class in accordance with BS EN ISO 22475-1:2006 and Eurocode 7:

- Soft to firm CLAY Class 2 – 3\*
- Stiff to Very Stiff CLAY Class 2 – 3\*
- SILT Class 3
- SANDS and GRAVEL with catcher Class 4

\* Reduced to Class 4 if water is added to the borehole

Consists of a steel body tube, containing a removable PVC plastic liner (class 3), an optional core-catcher, a spacing ring (used only with the core catcher) and a case-hardened drive shoe.

Type	Max OD	Min OD	Area Ratio
Standard System	118.6	104.4	29%
Plastic liner System	123.8	101.6	48%

## U100T System (OS-T/W)

Expected Class in accordance with BS EN ISO 22475-1:2006 and Eurocode 7:

- Static push – Class 1
- Dynamically driven – Class 2

Only suitable for fine grained soils with a strength consistency of firm to stiff.

Consists of thin wall steel, cadmium-plated steel or aluminium sample tubes, an optional thin wall core catcher and a case-hardened thin wall drive shoe. The drive shoes are supplied with a plain cutting edge. Plastic push-on caps can be provided for the sample tubes and a special sealing wax for long-term storage.

The thin wall means that the area ratio as defined in EN ISO 22475-1:2006 is 15% or less and the cutting shoe taper angle should be 5% or less thus allowing a Class 1 sample to be taken.

Type	Max OD	Min OD	Area Ratio
Thin Walled System	110.0	104.0	11.9%