

Technical Data – Windowless Sampler Boreholes & Dynamic Probing



For Site investigation work where full soil profiles are required, but where heavy plant would be unsuitable, we operate both Competitor Dart and Premier 110 tracked rigs. These integrated drilling platforms offer undisturbed sampling, Standard Penetration Testing (SPT) and Dynamic Probing (DPH and DPSH). Highly mobile and manoeuvrable, they can be tracked up slopes and can pass through a standard domestic doorway. The units are rubber tracked, light weight (6kpa ground pressure) and therefore cause low disturbance. These rigs are ideal for work on sites with restricted access; close-up against walls and inside buildings, where it would be otherwise difficult to obtain samples.

Sampling is achieved by a percussive method, with a chain-driven drop weight that repeatedly strikes an anvil, driving the rods and sample tubes into the ground. Depths achieved vary with soil types but are typically up to 10m (15m maximum) for sampling and up to 30m for probing. Window and Windowless Samplers are available for soil sampling in a nested range of diameters (typically 46mm to 101mm). In Window Sampling, the soil sample is simply removed through a "window" in the side of the steel tube. In Windowless Sampling a complete soil profile is retained in a rigid clear plastic liner.

A simultaneous casing system is available which allows 115 mm O.D. steel casing to be driven into the ground at the same time as a 101mm Windowless Sampler, thus preventing the borehole from collapsing, and ensuring that there is no risk of cross contamination between successive samples. Additionally, a U100 sampling system allows 128 mm O.D. casing to be driven into the ground at the same time as a U100 sampler.

	Premier 110s	Competitor Dart
Pullback (kg)	7000	7000
Fuel	Petrol	Diesel
Gross weight excluding tools (kg)	850	960
Travelling dimensions – length (mm)	2100	2360
width (with side basket*) (mm)	750 (1150*)	760
height (mm)	1350	1270
Operating dimensions – length(mm)	2400	2700
width (with side basket*) (mm)	750 (1150*)	920
height (with rod guide*) (mm)	2200 (3000*)	2400

Note: All dimensions are approximate and should be checked prior to mobilisation to site

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