

Technical Data - Cable Percussive Drilling Rig



Dando 2000, 2500 and 3000 cable percussive drilling rigs are frequently used to construct boreholes for both geotechnical and environmental investigation. The system of drilling can produce boreholes between 150 and 450mm in diameter, to depths of up to 50m, depending on the underlying geology.

The rig is equipped with a winch, which is driven by a diesel engine, and a tripod derrick of about 7m height. The derrick folds down so that the rig can be towed by a four-wheel drive vehicle. General specifications are given below:

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	Dando 2000	Dando 2500	Dando 3000
Winch - single line pull (kgf)	2000	2500	3000
Maximum Derrick loading (kg)	6000	7500	9000
Total weight excluding tools or casing (kg)	1700	1995	1850
Derrick working height under sheaves (mm)	5200	5460	5200
Travelling dimensions – length (mm)	7500	8450	8500
Width (mm)	1810	1850	1810
Operating dimensions – height (mm)	6650	6830	6550
length (mm)	4090	4200	4110
width between legs (mm)	2072	2072	2072
width wheel base (mm)	1810	1810	1810

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

A borehole is formed using either a 'clay cutter' for cohesive soils or a 'shell' (or bailer) for non-cohesive or saturated materials. A chiselling tool can be used to penetrate hard ground or obstructions. The sides of the borehole are supported by steel casing of various sizes which are driven (or surged) into the ground as the boring progresses. The material recovered from the borehole via both the clay cutter and the shell is used to provide a description of the sample collected.

The cable percussive rigs are equipped with sampling and in-situ testing equipment. The equipment includes; sliding hammers for undisturbed U100 (U4) and UT100(U4T) samples (for examination and laboratory analysis) and trip hammers for Standard Penetration Testing (SPT). Thin-walled piston samples are used for recovering undisturbed samples of soft normally consolidated soils. Permeability Testing (falling head tests), Borehole Vane Testing and Packer Testing can also be carried out in the boreholes, in order to provide information for geotechnical design.

The resultant boreholes can be used to install land gas or groundwater monitoring wells or other geotechnical instrumentation. We can also provide cable percussive drilling services for the installation of borehole soakaways and water abstraction wells.

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