METRO PILING

ENGINEERING STRONG FOUNDATIONS

BOTTOM DRIVEN MINI PILING

www.metropiling.co.uk

Bottom Driven Mini Piles are quick, cost-effective, low-energy driven displacement piles. Suitable for most ground conditions and ideal for poor ground conditions and contaminated soils. This method is one of the most environmentally friendly piling systems as it requires much less concrete than other solutions and does not produce any spoil.

DESCRIPTION

Bottom-driven mini piles are quick and efficient. Piles are formed by driving a crimped closed-end, thin-wall casing into the ground in lengths of 1m to 4m using an internal drop hammer onto a dry concrete plug. A wide range of pile diameters can be achieved from 105mm to 323mm, with load-bearing capacities from 50kN to 600kN.

This method is low noise, low vibration in comparison to more conventional driven precast or steel tube techniques and can be used in sensitive environments where the use of driven techniques is generally not permitted.

Bottom-driven mini piles are suitable for a wide range of sectors such as industrial, infrastructure, railway, residential and commercial projects.

At Roger Bullivant, we have a range of different rigs which enhances our ability to accommodate a variety of restricted access requirements.

APPLICATIONS

- Rail
- Commercial
- Residential

ADVANTAGES

- Suitable for most ground conditions
- Minimal site preparation
- Minimum vibration
- Limited headroom & restricted access
- Small lightweight equipment
- Quiet installation
- Cost effective
- Electric piling rigs
- Zero spoil

INSTALLATION

Bottom-driven piles are installed using a thin wall prefabricated tube typically supplied in lengths ranging between 1.0m – 4.0m

The pile is formed by first driving a closed ended starter casing into the ground using an internal drop hammer weight, driving onto a dry concrete plug. The drop hammer weight is lifted and dropped repetitively which drives onto the plug allowing the casing to be driven into the ground.

Subsequent casing sections are added as the pile is driven to depth. Casings are joined by a full but non-structural fillet weld as the installation proceeds. The pile is driven to a predetermined set or design depth. Once the required depth is reached the casing is then filled with concrete or grout with pile reinforcement introduced to complete pile formation.

TECHNIQUE CAPABILITIES

SPECIFICATION		FROM	TO
∅	Standard pile size	105mm dia	323mm dia
	Range of load capacity	50kN	600kN
	Range of pile depth	3.0m	25.0m*

*pile depth subject to ground conditions