



SELF DRILL MICRO-PILES

Self drill micro-piles are suitable for a variety of ground conditions including sand, gravels, clay, made ground and weathered rock. They can be installed through existing mass footings and base slabs.

BASIC TECHNIQUE

The piles are formed from a fully threaded steel bar with a hollow core which is drilled and simultaneously grouted into soils without a casing and employing rotary percussive techniques.

Grout is injected through the hollow bar with a continuous flush returned to the surface ensuring permanent support is maintained to the surrounding ground.

Self drill micro-piles are installed using small scale piling rigs and are particularly suited to axial compression and tension loads and can easily be installed at raking angles.

A variety of sacrificial drill bits are available to suit different ground conditions. As temporary casing is not required the technique is well suited to use in collapsing and problem ground.

APPLICATIONS

Applications include bearing and tension piles as well as soil nailing and ground anchorages.

The method is suitable for a wide range of project types including rail related work and foundation upgrades, stabilisation and underpinning as well as facade retention, tension piles, tie backs, highway and bridge works etc. The system can also be used to form contiguous piled walls.

STRENGTHS

- ✓ Small lightweight equipment
- ✓ Low noise and vibration
- ✓ Suitable for tension loads
- ✓ Minimal site preparation
- ✓ Can be installed successfully into most ground conditions including rock
- ✓ High output - combined drilling and grouting make high piling outputs possible
- ✓ Limited headroom, restricted access capability



SELF-DRILL MICROPILE WITH CLAY BIT



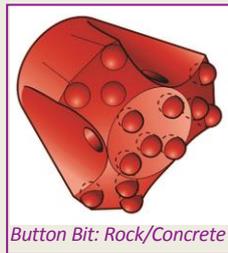
INSTALLING SELF DRILL ANCHORAGES

A SYSTEM FOR ALL GROUND CONDITIONS

By changing the drill bit at the end of the hollow bar, micropiles can be installed into practically any soil or weathered/weak rock type.



Clay Drill Bit



Button Bit: Rock/Concrete



Clay/Gravel Drill Bit

FAST INSTALLATION

Using rotary percussive drilling techniques combined with the pull down facility on the piling rigs and the lubrication that comes from the grout flush, these small diameter bars can be installed extremely rapidly. Outputs of 300-500m per shift are achievable in suitable conditions.



BUTTON BIT CAN DRILL THROUGH CONCRETE

TECHNICAL CAPABILITIES – SELF DRILL MICRO PILES

Specification	From	To
Bar Diameter	25mm	127mm
Drill bit Diameter	42mm	300mm
Typical Load Capacity	N/A	Up to 1500kN
Rig Height	2.5m	8.0m
Rig Length	1.8m	5.4m
Rig Width	0.75m	2.4m
Rig Weight	2,000kg	15,000kg
Operating Distance from face of Wall to Centre of Pile (including case)	1000mm	-

CONTACT US

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