

Cementation

SKANSKA

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Driven Piling

Application

A versatile system suitable for most types of soils providing economical and quick piling solutions.

Diameters of cast-in-situ piles range from 285mm to 525mm with a maximum depth up to 25 metres.

Working loads up to 1500kN can be carried depending on ground conditions.

Precast piles are either 230mm or 270mm square and normally carry loads up to 1000kN.

Integral enlarged heads can be formed on cast-in-situ piles.

Advantages

- No bore spoil to remove.
- All rigs use hydraulic hammers with electronic instrumentation system, Auto-Pile®.
- Precast piles can be supplied in 15m maximum segment lengths.

Patents

UK Patent Nos. 774725, 774726, 2125819, 729742 & 2334543
Australia Patent No. 742766
Czech Republic Patent No. 681771
Poland Patent No. 681771
Europe Pub No. 0937825
USA Patent Nos. 75/352566, 6168350 & 6641333
International Patent No. 100105
Mexico Patent Nos. 307000 & 306999
South Africa Patent Nos. 97/13238, 97/13237 & 97/13236
CTM Patent No. 624494

Trademarks

FRANKI®
AUTO-PILE®



Driven Cast In-Situ Piling

Cementation Skanska's Driven Cast In-Situ pile, the FRANKI® pile, offers both speed and versatility, providing an economic piling solution for most ground conditions. All our piling machines are track mounted and the majority are equipped with high performance hydraulic hammers allowing piles to be installed to the necessary depth quickly and efficiently.

All hydraulic hammer rigs have a digital instrumentation system which provides a continuous display of depth, driving resistance and set. The complete installation data, Auto-Pile®, is recorded for each pile and can be transferred to a PC for analysis and storage an in-cab printer can be used to produce a record on site in graphical form. The use of this instrumentation system can help to reduce or eliminate static load tests.

Top Driven Pile

Installation of this type of pile is quick and suitable for most ground conditions. The process is carried out by top driving a tube into the ground using a five-tonne hydraulic hammer. The bottom end of the tube is capped with an expendable shoe.

On reaching the required depth, full length reinforcement is then inserted and the tube filled with self compacting concrete. Whilst the tube is withdrawn the concrete is further compacted by using the rig tube vibrator or by repeatedly tapping the tube with the driving hammer.

Pile diameters range from 285mm to 525mm with working loads up to 1500kN. The piles can be constructed up to a maximum depth of 25m and can be reinforced to meet most design requirements.





Driven Precast Piles

Precast segmental piles are cast in varying lengths generally up to 15 metres. They can be joined together on site during the driving process by the use of a specially designed joint.

Piles can be provided in various sizes, formed in high strength concrete, with varying reinforcement.

Precast piles are suitable in a wide range of soil conditions. They are particularly useful where there is a need for very deep piles, typically up to 40 metres, in soft ground or in aggressive or contaminated soils. Piles can be pre-coated with a bituminous slip layer to reduce the effects of negative skin friction. In soils requiring protection to Class 5 the piles can be pre-coated, after casting, with an epoxy bitumen to provide an impervious and chemically inert barrier.

Enlarged Head

By utilising a specially adapted head former our driven cast-in-situ piles can be formed with integral enlarged heads giving savings to the client in pile trimming and floor slab costs.

All of Cementation Skanska's precast driven piling rigs are equipped with hydraulic hammers and a sophisticated instrumentation system, AUTO-PILE®, which records the complete installation data.

