TARANTO

PRECAST DRIVEN CONCRETE PILES

WE KNOW CONCRETE

PILING | FOUNDATIONS | PRECAST

EXPERTISE

Driven PCC piles are a total engineering solution. They are the most versatile deep foundation technique available and are suitable to most ground conditions, including soft alumina deposits, made ground and contaminated ground. A wide range of pile sizes, joints and rig types allow PCC driven concrete piles to be used as the foundations for the majority of structures, including commercial, industrial, domestic dwellings, marine and heavy civil works.

PCC piles consist of segmental lengths of reinforced concrete sections of nominal length between 3m and 15m. These sections are driven into the ground for any length and transfer superstructure loads to an underlying founding strata of suitable strength. Piles can be a single section, or several sections can be jointed to provide longer piles for deeper ground conditions.

PCC driven piles provide a quick and easy installed, cost-effective form of deep foundation.
They do not produce spoil during installation and are classed as displacement piles as lower level strata is displaced as the pile is driven deeper into the ground. During displacement the soil at the toe of the pile is compacted to a greater density and the driven pile can be capable of increased end bearing capacities. Additional pile load capacity is gained in skin friction along the shaft of the driven pile.

A displacement pile does not have a “soft bottom”, so large settlement characteristics are eliminated for driven piles. Groups of driven piles densify the adjacent strata and enable increased pile load capacities in comparison to other pile types of similar size/diameter.

Driven PCC piles maintain their shape during installation and are not susceptible to necking or loss of integrity. Dynamic pile testing will easily calculate the structural capacity of a pile and will determine the pile’s interaction with the surrounding ground and its integrity along its shaft length. Static pile testing can be used to physically measure the compressive, shear, tension and moment capacity of a pile.

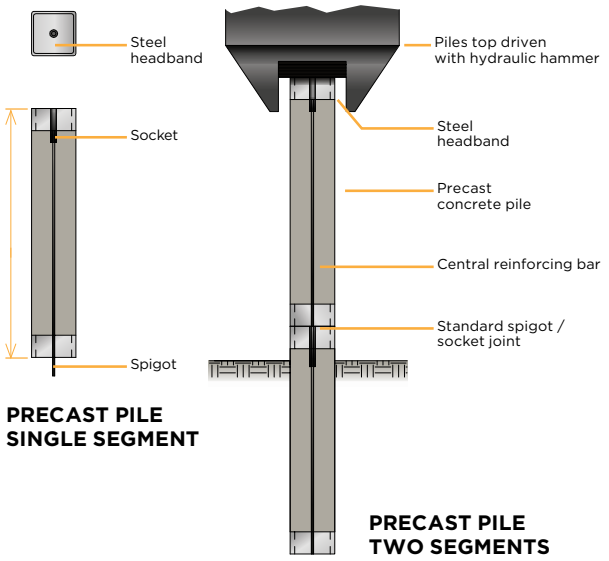
TARANTO PCC DRIVEN PILE CAPABILITIES

PCC Pile Size (mm²)	200	235	250	275	300	350	400
Compression (kN)	400	600	600	1000	1000	1200	1500
Lateral/Shear (kN)	54	169	84	169	84	240	–
Tension (kN)	–	270	–	270	47	393	410
Moment (kNm)	4	30	27	47	47	98	105
Reinforcement detail:							
Simple Compression detail	✔		✔		✔		
Prestressed		✔		✔	✔	✔	✔
4 T12 Full Length			✔		✔	✔	✔
8 T12 Full Length					✔	✔	✔
12 T12 Full Length					✔	✔	✔
Pile Joint Detail:							
Simple Compression Joint	✔	✔	✔		✔		
Simple Mechanical Joint		✔		✔	✔		
Multi-Bar Tension Joint					✔	✔	✔
Full Mechanical Balken Joint		✔		✔		✔	✔
Typical Rig Weight (Tonnes)	18-22	22-25	22-25	25-60	25-60	25-60	45-60

OUR PRODUCT BENEFITS

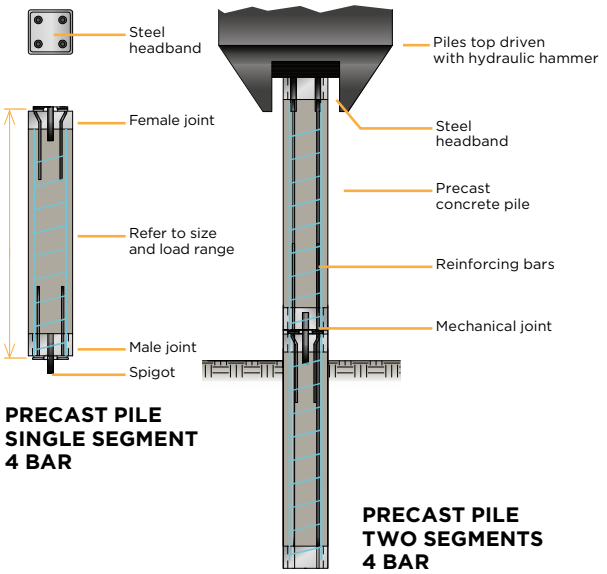
- Multi Pile Range no over design and value engineering provided.
- Range of Pile Jointing systems increased pile versatility and load capacities.
- ISO 9001 and CE Accreditation consistent, reliable quality assured products.
- In-house Design Team bespoke geotechnical design based on site soil investigations.
- Pile Testing Team providing real-time pile testing results to enable follow-on trades.
- No spoil or wastage providing considerable cost savings.

PRECAST CONCRETE PILES



PRECAST PILE SINGLE SEGMENT

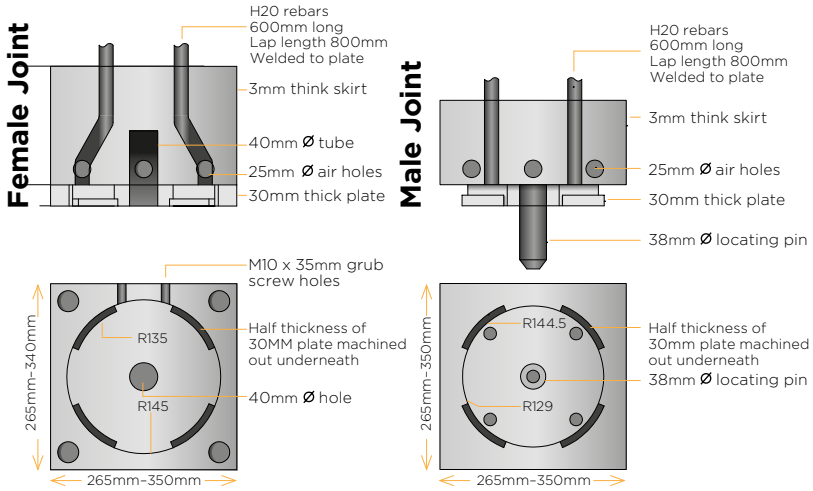
PRECAST PILE TWO SEGMENTS



PRECAST PILE SINGLE SEGMENT 4 BAR

PRECAST PILE TWO SEGMENTS 4 BAR

FULLY REINFORCED, MECHANICAL JOINT SYSTEM



EXPERIENCE

Taranto has over 20 years' experience of installing PCC driven piles in the UK and Ireland and using our full pile size range to match the best suited and most cost effective pile and pile joint to meet our clients' requirements. Our in-house design team analyse the geotechnical aspects of each site and provide bespoke pile design calculations for the compressive, lateral/shear, tension and moment capacities of our piles. Prior to works our Design Team can also provide calculations of expected levels of foundation/pile settlement and site levels of vibration and noise expected during construction works. Our site Pile Testing Team can monitor & record both vibration and noise levels at site throughout the duration of pile installation works.

The Taranto pile range has been successfully used on several of the largest and technically challenging PCC driven pile contracts in the UK and Ireland. View our Case Studies on PCC driven pile contracts recently completed by Taranto at: www.taranto.co.uk

SOLUTIONS

Taranto offers the largest range of PCC pile sizes available in the UK and Ireland. Pile sizes range from 200mm^2 simply reinforced compression only piles, up to 400mm^2 fully reinforced, mechanically jointed piles with considerable compression, shear, tension and moment capacities. Our extensive pile size range provides cost effective solutions compared with other deep foundation techniques, as our clients only ever use the pile size and pile length they require. With the additional technical expertise of our in-house geotechnical design team, the correct pile size and joint type suitable to site ground conditions can be designed and manufactured to meet our clients' exact needs.

The Taranto pile range means there is no need to be overly conservative in the choice of pile size and joint type and our clients achieve valuable savings by using the right PCC driven pile for their requirements.

Taranto maintains a continued programme of investment to our modern pile driving equipment. All our driven rigs are track mounted and range from 18 tonne Komatsu rigs suitable for commercial, domestic and self-builder works, up to 60 tonne long mast Juntan rigs capable of installing 400mm^2 fully reinforced, mechanically jointed PCC piles for high load capacities on large commercial, industrial works including civil project such as wind turbine farms and marine works.

TARANTO

bsi. ISO 9001 Quality Management

bsi. ISO 14001 Environmental Management

bsi. OHSAS 18001 Occupational Health and Safety Management

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