Precast driven concrete piles
**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 in to 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 piles 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.

**SOLUTIONS**

Taranto offer the largest range of PCC pile sizes available in the UK & Ireland. Pile sizes range from 200mm² simply reinforced compression only piles, up to 400mm² fully reinforced, mechanically jointed piles with considerable compression, shear, tension and moment capacities. Our extensive pile size range provides costs 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 meets 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 400mm² 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 PCC DRIVEN PILE CAPABILITIES**

<table>
<thead>
<tr>
<th>PCC Pile Size (mm²)</th>
<th>200</th>
<th>235</th>
<th>250</th>
<th>275</th>
<th>300</th>
<th>350</th>
<th>400</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Load Capacities:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compression (kN)</td>
<td>400</td>
<td>600</td>
<td>600</td>
<td>1000</td>
<td>1000</td>
<td>1200</td>
<td>1500</td>
</tr>
<tr>
<td>Lateral/Shear (kN)</td>
<td>54</td>
<td>169</td>
<td>84</td>
<td>169</td>
<td>84</td>
<td>240</td>
<td>tbc</td>
</tr>
<tr>
<td>Tension (kN)</td>
<td>/</td>
<td>270</td>
<td>/</td>
<td>270</td>
<td>47</td>
<td>393</td>
<td>410</td>
</tr>
<tr>
<td>Moment (kNm)</td>
<td>4</td>
<td>30</td>
<td>27</td>
<td>47</td>
<td>47</td>
<td>98</td>
<td>105</td>
</tr>
<tr>
<td><strong>Reinforcement detail:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple Compression detail</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Pre Stressed</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>4 T12 Full Length</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>8 T12 Full Length</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>12 T12 Full Length</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td><strong>Pile Joint Detail:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple Compression Joints</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Simple Mechanical Joint</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Multi-Bar Tension Joint</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Full Mechanical Balken Joint</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td><strong>Typical Rig Weight (Tonnes)</strong></td>
<td>18-22</td>
<td>22-25</td>
<td>22-25</td>
<td>25-60</td>
<td>25-60</td>
<td>25-60</td>
<td>45-60</td>
</tr>
</tbody>
</table>

© 2015 Taranto
Precast concrete piles

Pre-Cast Concrete Piles

- Multi Pile Range
- Range of Pile Jointing systems
- ISO 9001 and CE Accreditation

Pre-Cast Pile

- Single Segment
- Two Segments

Pre-Cast Pile Benefits

- In-house Design Team
- Pile Testing Team
- ISO 9001 and CE Accreditation

Fully Reinforced, Mechanical Joint System

- Female Joint
- Male Joint

Taranto Driven Piles

© 2015 Taranto
Precast concrete piles

EXPERTISE

Taranto has over 20 years of experience in installing PCC driven piles in the UK & Ireland and use 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 analyses 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 & technically challenging PCC driven pile contracts in the UK & Ireland. View our Case Studies on PCC driven pile contracts recently completed by Taranto at: www.taranto.co.uk

CONTACT

For more information on this product or any other of our products, visit us online or give us a call.

Taranto Ltd.
Old Scarva Road
Tandragee
Co. Armagh
Northern Ireland, BT62 2ED

T: +44 (0)28 3884 1765
F: +44 (0)28 3884 1815
E: info@taranto.co.uk

www.taranto.co.uk