Continuous Flight Auger (CFA) piles are suitable for most construction projects. Causing minimum disturbance, they are ideal for noise and environmentally sensitive sites for both load bearing piles and excavation support.

**BASIC TECHNIQUE**
A hollow stemmed continuous flight auger is rotated into the ground to the required depth. As the auger is withdrawn, concrete is pumped down the hollow stem under balancing pressure forming a shaft of liquid concrete to ground level. A reinforcing cage is then inserted by hand or vibrator.

Two significant factors influence the load bearing capacity of CFA piles: the sophistication of the equipment used and the experience of the operators on the ground. These factors are often overlooked at design stage, and the depth of experience within Balfour Beatty Ground Engineering, plus its investment in R&D are both key strengths in this area.
**TECHNICAL CAPABILITIES**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical Depth</td>
<td>N/a</td>
<td>Max 33m</td>
</tr>
<tr>
<td>Diameter</td>
<td>0.350m</td>
<td>1.2m</td>
</tr>
<tr>
<td>Load Capacity</td>
<td>Dependent on depth and ground conditions</td>
<td></td>
</tr>
<tr>
<td>Minimum Working Height</td>
<td>10m</td>
<td>33m</td>
</tr>
<tr>
<td>Typical Rig Weight</td>
<td>38,000kg</td>
<td>87,000kg</td>
</tr>
<tr>
<td>Noise Profile at 10m</td>
<td>85db</td>
<td>90db</td>
</tr>
</tbody>
</table>

**STRENGTHS**
- Minimal disturbance - hence limited risk of damage to adjacent structures
- No casing is required
- Suitable for all soil types
- Ideal for retaining walls
- Speed of installation

All rigs have an auto-concreting facility to ensure pile integrity during the concreting process, whilst at the same time minimising concrete waste within the bore and at the head of the pile.

The data is analysed on site to produce graphical representations of pile conformity. Data is then stored centrally to provide historical reference. Key data is also available to project managers via SMS interrogation.

**TECHNIQUE ENHANCEMENTS**

Stent Integrated Rig Instrumentation System (SIRIS) consists of a computer and sensors on the piling rig, a notebook computer used by the site foreman and a database at head office, all linked via GSM. The system provides instant data on parameters such as: Auger depth; auger rotation; concrete pressure; concrete volume; and productivity. A further datasheet is available with information on SIRIS.

**FOR FURTHER INFORMATION CONTACT:**

**HEAD OFFICE**

Pavilion B, Ashwood Park, Ashwood Way,
Basingstoke, Hampshire, RG23 8BG

* t: +44 (0)1256 400400
  e: enquiries-basingstoke@bbge.com

balfourbeattycsuk.com