



CONTINUOUS FLIGHT AUGER (CFA) PILING

CFA piles are suitable for most construction projects as they can provide both load bearing capability and excavation support. Causing minimum disturbance, they are ideal for projects that are sensitive to noise & vibration as well as environmentally sensitive sites.

BASIC TECHNIQUE

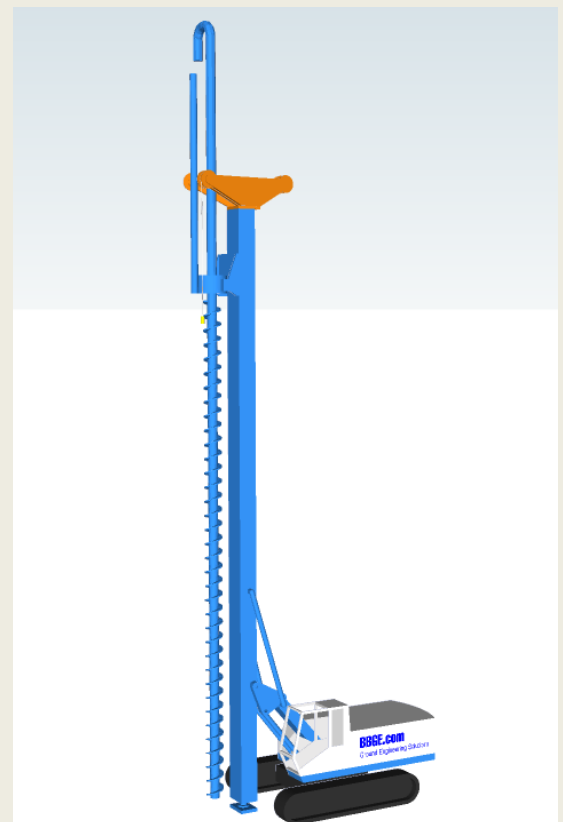
A hollow stemmed continuous flight auger is rotated into the ground to the required depth. As the auger is withdrawn, concrete is pumped down the hollow stem under balancing pressure and or concrete volume forming a shaft of liquid concrete to ground level. A reinforcing cage is then inserted by excavator,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

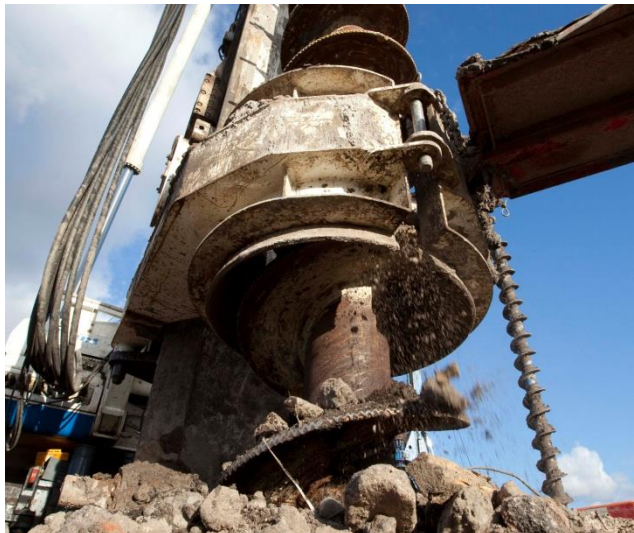
STRENGTHS

- ✓ 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

CAD IMAGE OF CFA RIG



B125 CFA PILING RIG



ALL OF BBGE'S RIGS HAVE HYDRAULIC AUGER GATES



CFA PILING

TECHNIQUE ENHANCEMENTS

Safety

BBGE's CFA rigs lead the industry in terms of safety features:

- ✓ All rigs have walkways fitted to allow safe access and maintenance.
- ✓ Hydraulic hoses are fitted with safety bagging to contain any hose bursts.
- ✓ Dual Hydraulic augers cleaners are fitted to the rig mast to ensure that spoil is efficiently removed from augers.
- ✓ All rigs are fitted with 360° vision cameras fitted to alert driver to people or site plant in close proximity.

Instrumentation

BBGE's Rig Instrumentation System (SIRIS) consists of a computer and multiple piling rig sensors linked by GSM to a database at head office. The system provides instant data on parameters such as: Auger depth; auger rotation; concrete pressure; concrete volume; and productivity. Uniquely in-built alarms guide the rig operator and ensure that piles are constructed in line with specifications. A further datasheet is available with information on SIRIS.

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 then stored centrally to provide historical reference. Key data is also available to project managers via SMS interrogation.



TECHNICAL CAPABILITIES – CFA PILES

Specification	From	To
Practical Depth	N/A	Max 32m
Diameter	0.350m	1.2m
Typical Load Capacity	<i>Dependent on depth and ground conditions.</i>	
Noise Profile at 10m	85db	90db
Rig Height	10m	33m
Rig Weight	38,000kg	115,000kg
Rig Length	6.76m	9.05m
Rig Width	3.7m	4.4m

CONTACT US

Balfour Beatty Ground Engineering Pavilion B, Ashwood Park, Ashwood Way, Basingstoke RG23 8BG

T: 01256 400400 | W: www.bbge.com | E: info@bbge.com