



## 89R Screw Piles – Product Page

SPECIFICATION	DEFINITION	89R
Wall thickness	Thickness of the screw pile tube wall	9.5mm
Torque limited	The ability of the pile to transmit torque is always the limiting factor. This is therefore the ultimate practical pile install torque capacity.	25kNm
Ultimate strength single helix	This figure shows the load which can be supported by a single helix- most piles use multiple helixes, but if a single one has to support more load, although non standard, this can be accommodated.	220kN
Empirical torque factor Kt Kt m <sup>-1</sup>	This is the "Empirical Torque Factor" expressed in metric units when torque is measured in kNm and force in kN. Its value decreases as pile diameter and helix plate thickness increases. This is due to a combination of skin friction and the energy needed to displace the soil.	25m <sup>-1</sup>

### Installation Equipment

The 89R Anchors can be installed using the excavator mounted 2500X/XG.

◇ The 2500X fits excavators from 5-10 tonne.

*This machines offer torque read outs, allowing the pile capacity to be calculated instantly.*

#### 2500XG



	2500X
Ultimate Capacity (un-factored) @ 25kNm torque	625kN
Safe Working Load (2.5 FOS) @ 25Nm torque	250kN



- ⇒ **Un-factored Load-** A Maximum load that the Pile will take before deflection exceeds standard limits
- ⇒ **FOS Factor of Safety-** is the ratio between the un-factored load and the working load
- ⇒ **Safe Working Load-** The actual load the pile is taking, when the building is in place

### Pile Life/Corrosion

In most conditions, provided the top 2 metres are galvanised the pile life will be in excess of 100years. Where the soil resistivity is less than 10 Ohm– further steps must be taken. This means salt water, wet peat and where soils are subject to saturation. For more information please download the soil corrosion chat on [www.abcanchors.co.uk](http://www.abcanchors.co.uk)

The estimated life is based on the assumption that a loss of 40% in thickness is acceptable without adverse effect on structural integrity. The atmospheric exposed areas of the piles are coated with high build zinc rich coating system or galvanised. There is a safety factor of x2 included for the anode design to take account of variances in corrosion conditions and ground resistivity.

Tube Specification	S355 HFS
Helix Specification	BS4360 43A
Fasteners Specification	Metric M22 GR 8.8

**An example of a torque reading from an installation:-**

**A gauge reading of 25kNm means an Ultimate Capacity of 625kN and working load of 250kN with FOC 2.5**