

76R Screw Piles – Product Page

SPECIFICATION	DEFINITION	76R
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.	16kNm
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.	160kN
Empirical torque factor Kt Kt m ⁻¹	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.	28m ⁻¹

Installation Equipment



650H

Hand Held

The 76R Anchors can be installed using the hand held 650H or the excavator mounted 1600X.

- ◇ The 650H compact size allows it to fit through doorways therefore is very useful on sites with limited access. Its is driven from a hydraulic powerpack
- ◇ The 1600X fits excavators from 5-8tonne.



1600X

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

	650H Hand Held	1600X Excavator mounted
Ultimate Capacity (un-factored) @ 16kNm torque		450kN
Ultimate Capacity (un-factored) @ 6.5kNm torque	180kN	
Safe Working Load (2.5 FOS) @ 16kNm torque		180kN
Safe Working Load (2.5 FOS) @ 6.5kNm torque	73kN	

- ⇒ **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

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

Tube Specification	EN-10210 S355 J2H
Helix Specification	EN-10025 S275 JR
Fasteners Specification	ISOM20GR8.8

An example of a torque reading from an installation:-

A gauge reading of 6.5kNm means an Ultimate Capacity of 180kN and Safe Working Load of 73kN with an FOC of 2.5