

Anchor Screw Piles

60mm | 76mm | 89mm



Anchor Screw Piles

60mm

Product Specification

SPECIFICATION	DEFINITION	60mm
Wall Thickness	Thickness of the screw pile tube wall	6.35mm
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.	6kNm
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.	90kN
Empirical Torque Factor $K_t m^{-1}$	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.	30m ⁻¹

Installation Equipment

The 60mm Anchors can be installed using the hand held 400H or the excavator mounted 600X. Both machines offer torque read outs, allowing the pile capacity to be calculated instantly.

- The 400H 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 600X fits excavators from 2-7 tonne

Un-factored Load

A maximum load that the Anchor Screw Pile will take before deflection exceeds standard limits

FOS Factor of Safety

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

	400H HAND HELD	600X EXCAVATOR
Ultimate Pile capacity (un-factored) @ 6kNm torque		180kN
Ultimate Pile capacity (un-factored) @ 4kNm torque	120kN	
Safe Working Load (2.5 FOS) @ 6kNm torque		60kN
Safe Working Load (2.5 FOS) @ 4kNm torque	48kN	

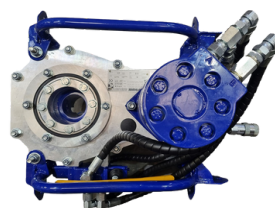
Pile Life/Corrosion

In most conditions, provided the top 2 metres are galvanised the pile life will be in excess of 100 years. Where the soil resistivity is less than 100Ωm – further steps must be taken. This means salt water, wet peat and where soils are subject to saturation.

An example of a torque reading from an installation:

A gauge reading of 3kNm means an Ultimate Capacity of 90kN and working load of 36kN with a FOS of 2.5

400H Hand Held



600X Excavator



Anchor Screw Piles

76mm

Product Specification

SPECIFICATION	DEFINITION	76mm
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 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

The 76mm Anchors can be installed using the hand held 700H or the excavator mounted 1600X. Both machines offer torque read outs, allowing the pile capacity to be calculated instantly.

- The 700H 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 5-8 tonne

Un-factored Load

A maximum load that the Anchor Screw Pile will take before deflection exceeds standard limits

FOS Factor of Safety

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

	700H HAND HELD	1600X EXCAVATOR
Ultimate Pile capacity (un-factored) @ 16kNm torque		450kN
Ultimate Pile capacity (un-factored) @ 7kNm torque	196kN	
Safe Working Load (2.5 FOS)@ 16kNm torque		180kN
Safe Working Load (2.5 FOS) @ 7kNm torque	78kN	

Pile Life/Corrosion

In most conditions, provided the top 2 metres are galvanised the pile life will be in excess of 100 years. Where the soil resistivity is less than 100Ωm – further steps must be taken. This means salt water, wet peat and where soils are subject to saturation.

*An example of a torque reading from an installation:
A gauge reading of 10kNm means an Ultimate Capacity of 280kN and Safe Working Load of 112kN with an FOS of 2.5*

700H Hand Held



1600X Excavator



Anchor Screw Piles

89mm

Product Specification

SPECIFICATION	DEFINITION	89mm
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.	22.5kNm
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 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.	25m ⁻¹

Installation Equipment

The 89mm Anchors can be installed using the excavator mounted 2500X/XG. This machines offer torque read outs, allowing the pile capacity to be calculated instantly.

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

Un-factored Load

A maximum load that the Anchor Screw Pile will take before deflection exceeds standard limits

FOS Factor of Safety

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

	2500X EXCAVATOR
Ultimate Pile capacity (un-factored) @ 22.5kNm torque	562.5kN
Safe Working Load (2.5 FOS)@ 22.5kNm torque	225kN

Pile Life/Corrosion

In most conditions, provided the top 2 metres are galvanised the pile life will be in excess of 100 years. Where the soil resistivity is less than 10Ωm – further steps must be taken. This means salt water, wet peat and where soils are subject to saturation.

An example of a torque reading from an installation:

A gauge reading of 22.5kNm means an Ultimate Capacity of 562.5kN and working load of 225kN with FOS 2.5

