RADIX Case Study

Developing a Precision Torque Monitor for Best Practice Ground Screw Installations

The Background

RADIX s a UK-based foundation engineering company specialising in ground screws, screw piles, and installation and testing equipment. Founded in Dundee in 2019 with a focus on efficiency and sustainability, the company has grown rapidly to become one of the UK's leading suppliers and installers of low-carbon screw foundation systems.

Today, RADIX supports projects across a variety of global sectors including renewable energy, modular construction, infrastructure, leisure and residential.

In recent years, RADIX has developed its own range of professional hardware and now supplies a variety of installation machinery, alongside specialised equipment for load-testing and verification, in a field where sustainability, traceability and auditable data are becoming increasingly important.

The Challenge

For ground screw and helical screw pile foundations, installation torque is a key indicator of soil resistance and load-bearing capacity, both of which are essential to verifying installation quality.

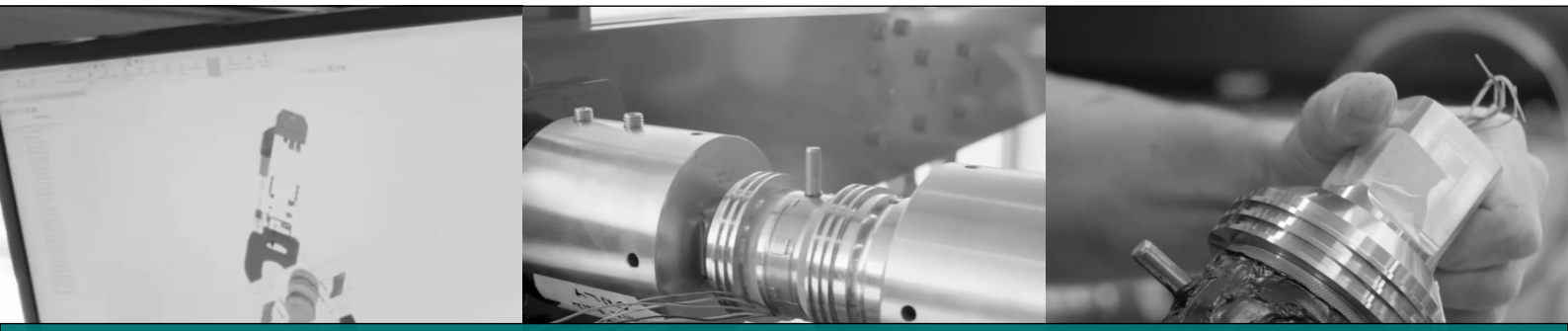
To support consistent, best practice installation and verification, RADIX identified the need for accurate, repeatable torque data captured directly during installation, particularly when using hand-held equipment and on challenging, space-limited work sites.

The right solution would have to be robust, compact, and straightforward to use, all the while delivering highly accurate data that would give operators more confidence in their installations. directions particularly important.

The Solution

RADIX initially worked with Datum's standard Auger Hawk range, using a pair of AH3 units for early evaluation and testing. Building on this, Datum Electronics adapted its existing torque monitoring technology to meet the specific requirements of handheld ground screw installation equipment. This included scaling the design for a more compact, portable format and incorporating a 1.5" square-to-1.5" square mechanical interface for straightforward integration.

The system underwent several design iterations, refining both the mechanical interface and overall configuration to ensure compatibility with RADIX installation equipment and reliable performance.



"The RADIX 8000 PTM gives engineers and contractors complete confidence in every installation. By combining world-class measurement technology with our application expertise, we are ensuring every pile is verified to the highest standards – first time, every time."

Callum Milne
Managing Director

The Outcome

This development led to the launch of the RADIX 8000 PTM, a compact, rugged, and fully wireless torque monitoring system that integrates seamlessly with hand-held ground screw machinery.

The RADIX 8000 PTM is now sold by RADIX as part of its range of ground screw installation equipment and is actively used within RADIX's own installation projects, establishing a best practice approach to installation and enabling contractors and operators to adopt the same data-driven methodology in their own work.

Learn more about the RADIX 8000 PTM at radixgroup.co.uk.

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