

Reducing costs and CO₂ emissions

The new EURODRILL C61 motor concept shines in action on a Danish jobsite as it demonstrates the company's commitment to innovation

The C61 motor concept, an evolution of the EA61V presented at Bauma 2022, once again demonstrates EURODRILL's commitment to innovation. In real-world construction applications, this patented motor concept stands out for its increased efficiency, broader torque and speed range, and high reliability.

The selection of the Nordhavn urban development project in Copenhagen as a test site for the new energy-efficient C61 drive concept was particularly well suited. Denmark has long been regarded as a global leader in sustainability, and Nordhavn is a flagship project in this regard. The district, which is transforming from a former port area into a climate-neutral residential and commercial zone, was the first in the world to receive the DNGB Gold certification for sustainability.

CHALLENGING CONDITIONS

True to the principle that ambitious goals often come with challenging conditions, construction companies working on the project face daily struggles with high groundwater levels and extremely hard chalk and flint layers.

To ensure optimal transportation links, construction of the Nordhavn Tunnel has been underway since the summer of 2024. As part of a joint venture, long-standing EURODRILL partner Grundbau Nord is drilling over 1000 anchors in the tunnel entrance areas, which are being constructed using an open-cut method.

Difficult ground conditions posed challenges at the start of the project, pushing conventional drilling systems to their limits. Beyond the shortened lifespan of conventional geroler motors, the drilling rigs faced significant thermal stress on their hydraulic systems.

"Grundbau Nord approached us in the fall regarding these challenges. At that time, we were in the final phase of developing the C61, which promised to solve all the reported issues," Andreas Pikowski, EURODRILL's sales director, said.

COLLABORATION

An agreement was quickly reached to collaborate on testing the innovative motor concept in real-world conditions. The C61 was integrated into the EURODRILL drive system for on-site deployment. This new motor carries forward all the advantages of the EA61V, which has been successfully used on numerous construction sites since its launch in 2022. Compared to its predecessor, the C61 features an optimised design and is 130mm shorter. Additionally, the additional cost of the system has been reduced by approximately 80% compared to the previous model.

Since early December, the anchor drilling rig has been operating with EURODRILL's latest drive technology. The focus is not only on documenting direct experiences with the C61 motors but also on comparing them with previously installed motors and other drilling units with different drive technologies.

After just a few weeks, the results have been overwhelmingly positive. Drilling performance has slightly improved, while fuel consumption per anchor has been reduced by up to 20%. This not only translates into significant cost savings but has also led to several tons of CO₂ emissions being avoided during the short test phase. The efficiency gains are also evident in the thermal performance of the hydraulic system – critical oil temperatures were never reached at any point.

The test run in Copenhagen has proven that EURODRILL has found a solution to the current challenges in motor technology for drilling drives.

RETURN ON INVESTMENT

Given the performance benefits and cost efficiency, the C61 is expected to be integrated not only into new drilling systems but also as a retrofit solution for existing equipment, delivering a rapid return on investment.

"We are delighted to offer this motor technology not only for large drilling rigs but also for anchor drilling rigs. We are proud to showcase at Bauma 2025 that this proven technology has become the new standard in our anchor drilling rigs," Ralf Sönnecken, managing director of EURODRILL, said. ♥

"We are delighted to offer this motor technology"



EURODRILL's C61 drive concept has been proven a success after its use on a challenging jobsite in Denmark