

Case story

VSD control reduces production cost by more than 75% on mining barge

Reliability and efficiency increased while costs dropped dramatically, when mining company replaced an unreliable diesel engine with an electrical motor controlled by a VLT® AutomationDrive.

On the Danube, close to the town of Kovin in Serbia, a mining barge excavates gravel from the riverbed up to 30m depth and prepares the ground for another vessel to mine coal from a depth of up to 40m.

Before installing the drive the excavator was powered by a diesel engine, a solution that was beginning to show its age and becoming unreliable. Spare parts were difficult to find and the engine itself consumed 60 litres of diesel per hour. Therefore, the owners, N&MM Beton decided therefore to replace the ageing system with a new 315 kW electric motor, speed controlled by a VLT® AutomationDrive FC 302 in an IP 54 cabinet.

Compared to other options, the advantage of Danfoss was the shortest delivery time, access to a qualified and

experienced service partner, fast and efficient assembly and not least the necessary maritime certificates. With its compact design installation and commissioning took place very quickly and efficiently.

Better control – lower costs

The efficiency gains of the new system are impressive. Compared to the previous status and use of 66 € / hour, the average cost per hour now is only 15 €. This means that the payback time for the new system was less than six months.

The end result is much better control of the trench, as the operator can now change the speed at which the excavation is carried out. Also, due to the soft start the mechanical parts such as bearings, shaft, and belts suffer less wear and tear, which reduces maintenance and prolongs the system's life expectancy.



What VLT® is all about

Danfoss VLT Drives is the world leader among dedicated drives providers – and still gaining market share.

Environmentally responsible

VLT® products are manufactured with respect for the safety and well-being of people and the environment.

All frequency converter factories are certified according to ISO 14001 and ISO 9001 standards.

All activities are planned and performed taking into account the individual employee, the work environment and the external environment. Production takes place with a minimum of noise, smoke or other pollution and environmentally safe disposal of the products is pre-prepared.

UN Global Compact

Danfoss has signed the UN Global Compact on social and environmental responsibility and our companies act responsibly towards local societies.

Impact on energy savings

One year's energy savings from our annual production of VLT® drives will save the energy equivalent to the energy production from a major power plant. Better process control at the same time improves product quality and reduces waste and wear on equipment.

Dedicated to drives

Dedication has been a key word since 1968, when Danfoss introduced the world's first mass produced variable speed drive for AC motors – and named it VLT®.

Twenty five hundred employees develop, manufacture, sell and service drives and soft starters in more than one hundred countries, focused only on drives and soft starters.

Intelligent and innovative

Developers at Danfoss VLT Drives have fully adopted modular principles in development as well as design, production and configuration.

Tomorrow's features are developed in parallel using dedicated technology platforms. This allows the development of all elements to take place in parallel, at the same time reducing time to market and ensuring that customers always enjoy the benefits of the latest features.

Rely on the experts

We take responsibility for every element of our products. The fact that we develop and produce our own features, hardware, software, power modules, printed circuit boards, and accessories is your guarantee of reliable products.

Local backup – globally

VLT® motor controllers are operating in applications all over the world and Danfoss VLT Drives' experts located in more than 100 countries are ready to support our customers with application advice and service wherever they may be.

Danfoss VLT Drives experts don't stop until the customer's drive challenges are solved.

