

Drive retrofit and digital upgrade for Konecranes AGD grab unloaders in Bristol



A new drive plus remote digital monitoring for a Konecranes AGD grab unloader in Bristol Port.

Photo courtesy of Bristol Port, United Kingdom



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There has been a port at Bristol since before Roman times. Located on the west coast of England with superb landside links by road, rail and pipeline, the modern commercial Port is one of the UK's major ports and possesses the ability to handle an eclectic range of cargoes including bulk, containers, steel, cars, liquid fuels and project cargo.

To maintain a high volume of throughput, the Port operates a large fleet of harbour equipment, including two Konecranes AGD cranes to handle bulk cargo. The Port serves customers with an ever-expanding range of dry bulk and thus the Port must maintain the long-term reliability of their cranes. They chose to upgrade the drive and control system and add remote monitoring to each of their Konecranes AGD cranes.

With new drives and remote access, this retrofit adds 10–15 years to the life of the crane. The updated cranes require less maintenance and therefore cost less in downtime. When the two Konecranes AGD cranes work together, the dock can handle vessels up to 130,000 dwt. Performance and productivity stays high and maintenance is easy with guaranteed technical and spare parts support long into the future.

Maximize crane lifetime with minimal expense

Konecranes equipment is built to last for decades. But even the highest-quality components will eventually wear out, while the steel structure of the crane is often still in good working condition. So a drive retrofit not only improves performance, but also replaces obsolete parts from the drive's original equipment manufacturer (OEM) to ensure that parts are always available and downtime is minimized.

"Our equipment must be reliable to ensure uninterrupted service for our customers. As we move ahead, we expect to increase the volume and variety of cargo we handle, so we can't afford much downtime," says David Hopton, Project

Engineer, Procurement and Equipment Support, Bristol Port. "Already this retrofit has improved crane performance, while giving us peace of mind that spare parts will continue to be available. Also, extending the life of the crane is fully in line with our sustainability goals as we maximize the usefulness of our existing equipment."

The Konecranes drive retrofit is a turnkey solution with customizable features for specific cranes. In this case, two Konecranes AGD unloaders had their DC drives for hoisting and slewing replaced, as well as the variable braking resistor, its motor modules and control units. A new onboard CMS computer was also installed with HMI screens, a keyboard, mouse and an Uninterruptible Power Supply (UPS, to ensure safety in the unlikely event of a power failure) for the electrical control room. The addition of TRUCONNECT® Remove Monitoring offers digital reports on crane performance to help optimize deployment and extra technical analysis to assist in maintenance.

Looking towards the future

"The AGD retrofit underlines Konecranes' expertise with customized equipment. Retrofits are a cost-efficient and sustainable way to improve the performance and extend the useful lifetime of any crane," says Marc Wilson, Frontline Manager UK, Konecranes Port Services. "By installing updates backed up with digital support, Bristol Port demonstrates a strong commitment to the future of their business and their customers. We have worked with them for many years and are proud of our deep and solid partnership."

These upgrades are part of Konecranes Port Services' continuous work to improve the sustainability and long-term value of our equipment for our customers. Retrofits and digitalization use smart design, predictive maintenance and the latest in crane technology to help lower environmental impact by optimizing the need to move goods and people, maximizing the product life cycle and advancing the circular economy.

In 2023, Bristol Port had a **drive and control system retrofit** and TRUCONNECT® Remove Monitoring installed on their two Konecranes Advanced Grab Drive (AGD) unloaders. The upgrade ensures higher efficiency and sustainability as well as continued technical support and spare parts availability. Crane performance can be easily followed online, providing data for optimized use and preventive maintenance to maximize uptime.



Konecranes is a global leader in material handling solutions, serving a broad range of customers across multiple industries. We consistently set the industry benchmark, from everyday improvements to the breakthroughs at moments that matter most, because we know we can always find a safer, more productive and sustainable way. That's why, with around 16,600 professionals in over 50 countries, Konecranes is trusted every day to lift, handle and move what the world needs. In 2023, Group sales totalled EUR 4.0 billion. Konecranes shares are listed on Nasdaq Helsinki (symbol: KCR).

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