

## KINSHOFER re-handling attachments for delicate goods

Grain feeds the world — that is a truth that cannot be denied. More than one-third of the earth's population depends on wheat as a staple of its diet. When milled into flour, the grain accounts for almost 20% of calories and protein consumed by humans, more than any other single food source. Wheat is grown all over the world and of course, not necessarily consumed where grown. The crops are transported from one continent to another, coming through the local harbours.

And here is where Kinshofer comes into play. For more than 50 years now, Kinshofer has been a major manufacturer of high-quality attachments for truck mounted cranes and excavators. Especially in the last two decades, Kinshofer has become more and more interesting for the re-handling business, producing large re-handling clamshell buckets (C-Series) for excavators and carriers with an operating weight from 18 tonnes of up to 100 tonnes as well as smaller ones for loader cranes.

If you want to handle bulk material on industrial or harbour sites or transshipment stations in large amounts, it highly depends on the kind of 'mass' you want to grab when choosing the right attachment for the job. Wherever giant cranes, pneumatic vacuum elevators (grain blowers) or conveyors are not available or possible, the classical grabbing devices will always be first choice. Attached to an excavator, their mobility makes them extra attractive. And as grain is perishable, especially under humid conditions, it must often be unloaded fast and cannot wait for special unloading devices to arrive.

The sturdy Kinshofer re-handling clamshell buckets of the C-VHD-series are an all-round solution, not only for grain, but for many different materials that are

*The Kinshofer C-VHD is often seen working on Dutch harbors. Pictured, the largest version C100VHD for up to 100t operating weight.*



handled at harbours. They have been developed especially for the loading and unloading of bulk materials in large amounts. They feature high volume, torsion-resistant shells and thanks to the integrated 360° rotation, the grab can always be positioned precisely. Bearing points have been equipped with specially coated bushings and hardened pins. For especially delicate cargo like grain, there is also the option of closed shells. The shells of the C-VHD-series is driven by vertical hydraulic cylinders with piston rod protection.

To protect the handled goods even more, the C40VHD is also available with closed shells.

With a truck, it is easy to bring material to a designated spot — may it be a harbour or railway station. And even easier to load or unload a barge or wagon there with the Kinshofer re-handling grapples for loader cranes. Thanks to the dedicated shell design of the KM 622 and KM 602 grapples, there are practically no 'left overs' of the material to be picked up, as the working edges are vertical when the buckets are

open. This also allows a deep plunge into the pile of material. The low self-weight of the clamshell bucket guarantees a maximum load and due to the flat closing curve, the base of the wagon or barge will not be damaged during unloading.

The Kinshofer department for special solutions is frequently developing attachments for excavators and loader cranes for re-handling tasks, as this field of industry is getting bigger and more important every day. More dedicated tools for specific tasks or materials are needed and this is where the Kinshofer special developments come into action. Not only the tasks and materials might vary, but also the carrier machines. So Kinshofer can e.g. also equip portal cranes, which require especially designed grabs.

Kinshofer sticks strictly to innovation and quality. Thomas Friedrich, President & CEO of the Kinshofer Group, says: "Kinshofer continues its strategy to provide the industry with a 'one-stop-shop' solution of outstandingly engineered products to increase efficiency and, more importantly, profitability of our customers."

*Equipped with a 360° hydraulic rotator for easy positioning with a loader crane: the KM 602 and KM 622 re-handling clamshell buckets.*

