RIKON: fully electric portal cranes for bulk unloading

RIKON has been designing and building cranes since 1991 and remains the only manufacturer of portal cranes in the Baltic States. The company's production site is located in Riga, and its machines are assembled and tested at the berth of the Freeport of Riga. For bulk cargo handling, RIKON offers the RPS series of fully electric portal cranes. The cranes can be supplied complete with grabs of various types and volumes, and with receiving hoppers. The range is complemented by RMG and RTG container cranes and special purpose equipment.

The core of the series is formed by cranes with a double jib level luffing boom system: as the outreach changes, the load travels horizontally, which shortens the working cycle and simplifies precise positioning. The line includes three base models: RPS-300, RPS-640 and RPS-1600. Intermediate versions, such as the RPS-1100, are built for specific projects. The compact RPS-300 unloads up to 400tph (tonnes per hour), while the RPS-1600, the largest in the line, reaches 1,600tph; machines with higher output are designed on request, since almost every crane is created for the needs of a particular terminal. Lifting capacity in grab mode ranges from 10 to 32 tonnes in standard versions, and up to 50 tonnes as an option. In hook mode the RPS-1600 lifts up to 63 tonnes, so the same crane also serves unit loads.

For heavier and oversized cargo, separate models within the RPS series are designed with hook capacities of up to 200 tonnes. Boom outreach reaches 40 metres in the base configuration, and versions with an extended boom are available. The cranes are rated for continuous intensive operation, duty class A8 under ISO 4301/1, and work with hook, grab, magnet and lifting beam; the RPS-1600 can additionally be equipped with a spreader. All mechanisms, including hoisting, luffing, slewing and travel, are driven by electric motors with an energy recovery system.

The range of cargoes handled is defined by the choice of grab. Four-rope clamshell grabs are supplied in volumes from 4.5m³ to 48m³ and are matched to the density of the material and the lifting capacity of the crane: coal, iron ore concentrate, pig iron, scrap metal and agricultural bulk cargoes, including grain. For light agricultural products there is a 48m³ grab for a crane with a lifting capacity of 53.6 tonnes; for coal, grab volumes reach 35m³; for dense ore concentrate, compact models of 5.5 to 10m³ are used. Multi-jaw grabs are intended for scrap metal, pig iron and limestone, and a separate model works with timber. The grabs are made of corrosion-resistant materials and are supplied with the crane as a single system. RIKON is also developing solutions in the field of integrated cargo handling complexes.

Projects involving bulk handling equipment have been successfully



RIKON cranes in operation at the quayside.





Crane assembly taking place at RIKON's berth at the Freeport of Riga in Latvia.

completed in Latvia, Turkey, Kazakhstan, Bosnia and Herzegovina, and Georgia. The largest of the recent projects have been carried out in Turkey. The company has completed a project for the İsdemir Port of OYAK Group, one of the country's largest industrial conglomerates.

This was followed, in the spring of 2026, by the assembly and testing of two RPS-1100 cranes, weighing 430 tonnes each, at the berth of the Freeport of Riga; work did not stop even during one of the coldest Latvian winters of the past 20 years. The cranes were built for a company among Turkey's top 100 industrial enterprises: its specialised terminal handles up to 14.5 million tonnes of cargo a year and receives vessels carrying up to 110,000 tonnes.

In July 2026 both machines departed for the customer fully assembled, aboard the heavy-lift vessel *Poolgracht*. Delivery in fully assembled form has become a signature RIKON method, proven on the İsdemir project: on arrival, the company's specialists unload the cranes, install them on the crane rails and connect them to the terminal's infrastructure, so the customer avoids months of installation work on site.

Beyond the bulk handling segment, RIKON equipment is supplied to France, Poland, Germany, Spain, Uzbekistan and Slovakia.

Particular attention in the design is paid to the cost of ownership. The classic lattice portal is combined with a slewing arrangement based on standard bearings available on the open market: replacing the unit takes a matter of days and does not require large bearings made to order with long delivery times. Each crane is adapted to the environmental conditions of its working site. The RPS-1100 cranes for Turkey, for example, are designed to operate at temperatures from minus 10 to plus 50° Celsius. RIKON is currently building cranes for a project in France, where the requirement is to withstand wind speeds of up to 200km per hour in out-of-service condition.



Grab operations.

Fully electrically driven mechanisms with energy recovery answer the requirements of ports for lower emissions and lower energy costs. The condition of the equipment is monitored by the RIKON Connect system: it tracks the crane's components in real time, warns of faults and helps plan maintenance in advance, before unloading comes to an unplanned stop.

RIKON has been building cranes in Riga since 1991, delivering them to customers across Europe and Central Asia. Each machine is designed for the berth, the cargo and the conditions of a particular customer, and is handed over ready for operation.



Two 430-tonne RPS-1100 cranes being loaded into the hold for shipment to RIKON's customer in Turkey.

