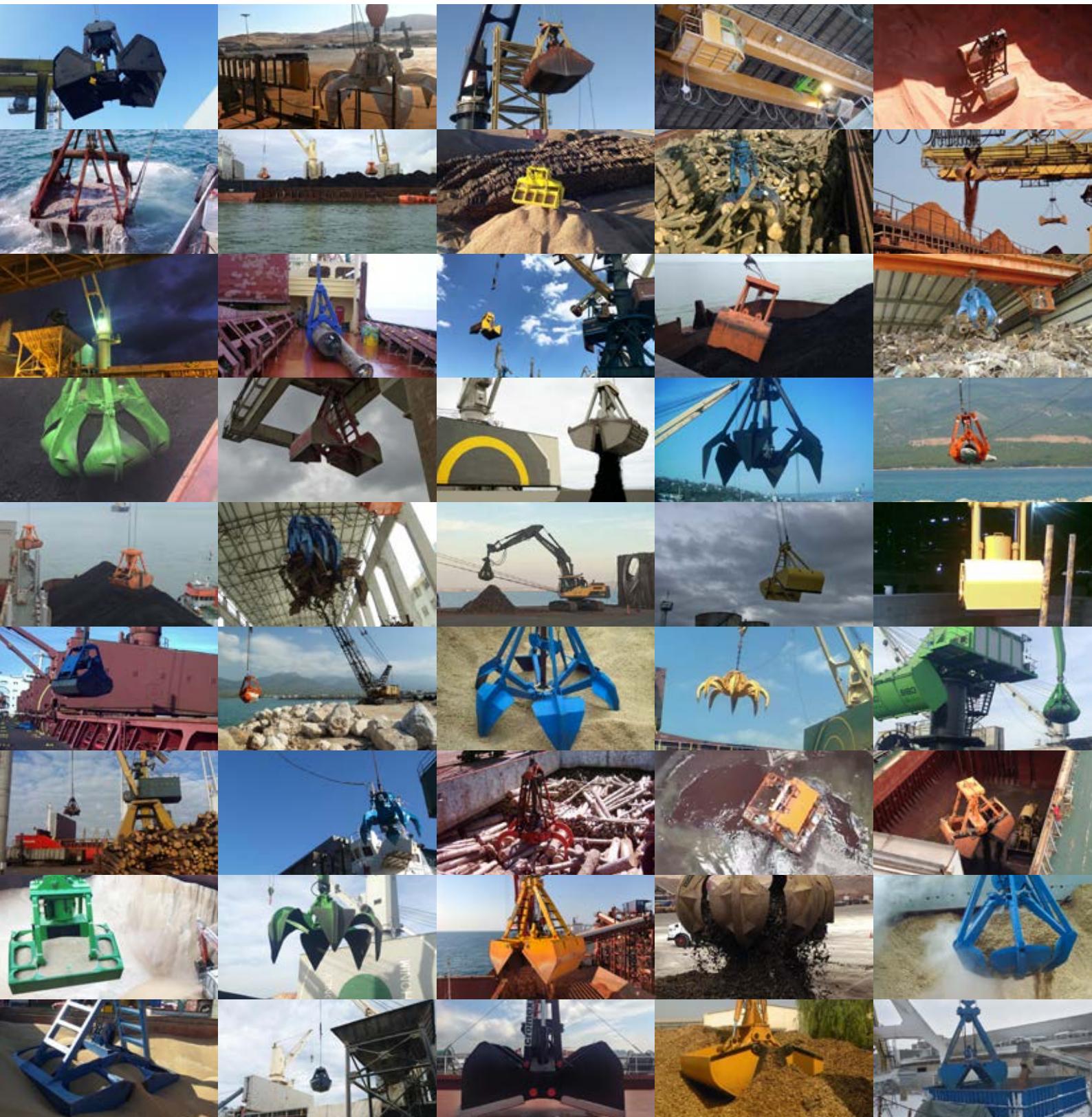


CROMEX®

GRABS



**Radio Remote Control Grabs | Mechanical Grabs
Electro-Hydraulic Grabs | Hydraulic Attachments
Grab Spares | Port Equipment**

about us

Independence, experience and expertise since 1985 with certified assurance in the sector of professional grabs for cranes and construction machines, is just a few of the characteristics that make Cromex® Grab the obvious choice when it comes to tailored solutions. Our grabs are at world standards and we are proud of owning a modern machine park that is adaptable very fast to technological developments.

We strive for close cooperation with our customers and business associates, based on loyalty and fair play. Rather than being content with short-lived success, we aim for a long-term relationship. Our policy is to be satisfied with our work only when the customer or business associate is satisfied.

Our products can be seen all over ports, cement and steel factories and on ships in Turkey and increasingly in other countries. High-standard technology and reliable products are the result of our respect for the requirements of the market in combination with incremental improvement and implementation of experience gained throughout decades. Our independence enables us to take decisions rapidly and autonomously.

We measure success with mutual satisfaction, as the number of our customers grow and both the products as well as the aftersales services supplied surpass their expectation.

Ozan Özkan, Directing Manager

REMOTE CONTROL GRAB

SINGLE-ROPE, REMOTE CONTROLLED, ON-THE-HOOK, ESPECIALLY
DESIGNED FOR VESSEL AND PORT CRANES.

For efficient bulk cargo handling in the maritime sector on Vessel Cranes or Portal Cranes the Radio Remote Controlled Grab is the most preferred type. It is a single-rope and on-the-hook solution, which can work on single drum cranes. The grab can be attached on any type of crane hook and is ready to start working.

Crane operators only use a remote control transmitter (hand unit) as control. The opening process can be interrupted and continued several times in order to ensure bulk material is unloaded in a controlled manner and with reduced dust emission. And it's easy maintenance is an additional advantage.

The Remote Control Grab does not need any external power source or installations like cable drums or electrical control panel. High quality RC systems are used only. The MAX-CR and MID-CR Series provided by ELFATEK, have special software and design for the Cromex RCC Grab.

- Special Software Program (no additional switchboard)
- Heavy duty, IP65
- Up to 150 m without antenna on receiver and transmitter indoors, outdoor 300 m
- 3+1 functions (Slow Open / Fast Open / Stop (Close Valve) / Automate (Slow Open / Fast Open))
- Battery life saving

RC GRAB

- Radio Remote Controlled
- 3+1 RC functions
- Single-Rope (single drum crane)
- On-The-Hook solution
- Central Cylinder / Robust Structure
- No additional equipment needed
- Less maintenance work
- Easy to operate

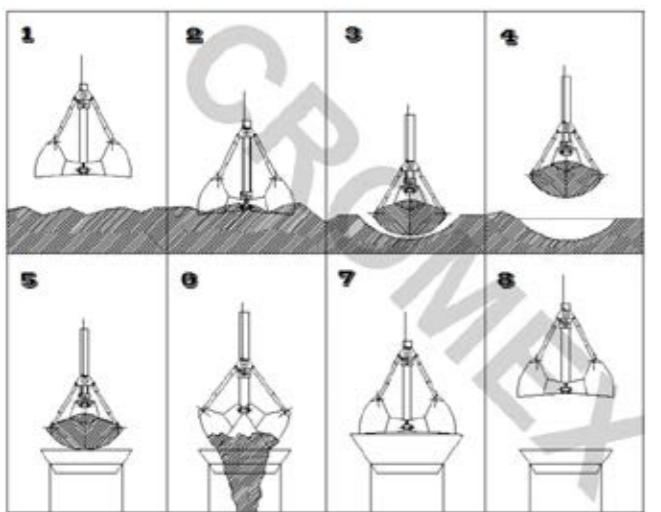


TOUCH-DOWN GRAB

MECHANICAL SINGLE-ROPE | ON-THE-HOOK SOLUTION | TOUCH-DOWN
LOCK MECHANISM | FOR SINGLE DRUM CRANES

The Single Rope Grab, also called Touch-Down Grab, is especially designed for cranes with a single cable drum. Also most vessel cranes have single drum cranes, that cannot operate 2- or 4-Rope Grabs. In such case this grab will be a practical On-The-Hook solution. A mechanism on the grab, locks/unlocks the grab to open or close each time it touches the ground. This system is mostly preferred, if there is only one cable available.

A step by step description of a touch-down mechanism:



- Grab is lowered at open position.
- After grab touches down on the material, the rope from the crane is released until loose.
- The mechanism is **locked** now.
- The grab is pulled up and will close (buckets or tines), filling up with material.
- The loaded grab is taken to destination. At unloading destination (in this case, a hopper), the grab will be lowered to touch-down again until crane rope is loose again. The mechanism is **unlocked** now.
- When lifted, the material will spill out as the grab opens.
- The grab is empty.
- The grab is taken to loading destination

MCSR GRAB

- Mechanical
- Single-Rope (single drum crane)
- On-The-Hook solution
- Touch-Down required to Open/Close the grab
- No additional equipment needed
- Shock-absorbing cylinder
- Less maintenance work
- Easy to operate



MECHANICAL TWO-ROPE GRAB

TWO-ROPE GRABS FOR CRANES WITH TWO CABLE DRUMS

The Mechanical Two-Rope Grab is used to handle various kinds of fine and granular bulk material, mainly with cranes that have two drums (1 Rope to Hold and 1 Rope to Open/Close the grab). The design is tailor-made and depending on customer specified details in order to fit overall weight, required structure, payload ratio, filling degree and digging force as well as environmental regulations at ports or other plants.

MC2R GRAB

- Mechanical Open/Close
- 1 Rope to Hold
- 1 Rope to Open/Close
- For cranes with two cable-drums
- Tailormade design
- Less maintenance work (lubrication only)
- Easy to operate



MECHANICAL FOUR-ROPE GRAB

FOUR-ROPE GRABS FOR CRANES WITH TWO CABLE DRUMS

The Mechanical Four-Rope Grab is used to handle various kinds of fine and granular bulk material, mainly with cranes that work with four ropes from two drums (2 Ropes to Hold and 2 Ropes to Open/Close the grab). The design is tailor-made and depending on customer specified details in order to fit overall weight, required structure, payload ratio, filling degree and digging force as well as environmental regulations at ports or other plants.

MC4R GRAB

- Mechanical Open/Close
- 2 Ropes to Hold
- 2 Ropes to Open/Close
- For cranes with two cable-drums
- Tailormade design
- Less maintenance work (lubrication only)
- Easy to operate



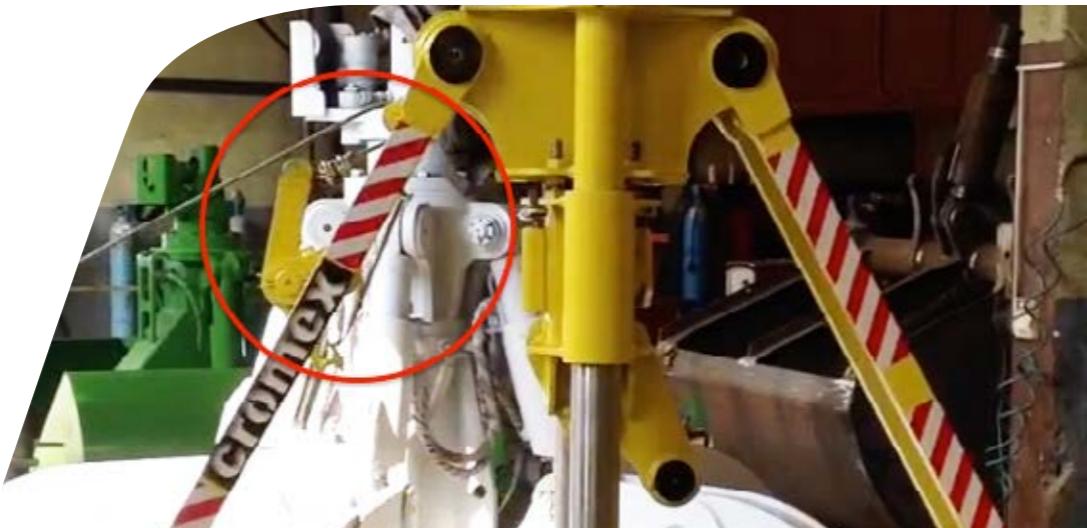
MECHANICAL HAND-TRIPPED GRAB

MECHANICAL, SINGLE-ROPE, HAND-TRIPPED / HAND-PULL

The Mechanical Hand-Tripped Grab (Hand-Pull) has a mechanism, which has one rope for lifting/lowering the grab from the crane and one rope to open the grab manually (pulled by hand) by an additional operator on the ground, pulling it at discharge destination (mid-air opening).

MCHT GRAB

- Mechanical Open/Close
 - Touch-Down to close
 - Pull rope to open
- Single-Rope and On-The-Hook solution
 - (possible to work with single drum crane)
- Less maintenance work (lubrication only)
- No additional equipment needed



HYDRAULIC ATTACHMENT

MANIPULATORS, EXCAVATORS

Hydraulic grabs are specially designed for charging and discharging of bulk materials on cranes with hydraulic system. They are available with open or closed shells/tines depending on the job and the type of material to be handled. Manufactured of high wear resistant steel, all bearings are heavy-duty and sealed for high performance. Cromex Hydraulic Grabs are manufactured with a 360° hydraulic rotor with hydro-motor as standard. We manufacture attachments of your choice to fit almost all available cranes in the market. Hydraulic grabs can be attached to hydraulic machines, excavators or manipulators and connections will be fitting according to the crane specifications.

Grabs of the new **SWITCH** Series can both be used on machinery (hydraulic) and on EOT cranes (electro-hydraulic). Please contact our sales office for more information.

HA GRAB

- Hydraulic Grab Design
 - Clamshell
 - Polyp (Orange Peel)
 - Timber Grab
 - Sorting Grab
 - Special Design
- SWITCH Series
 - Machinery / Excavators
 - EOT Cranes



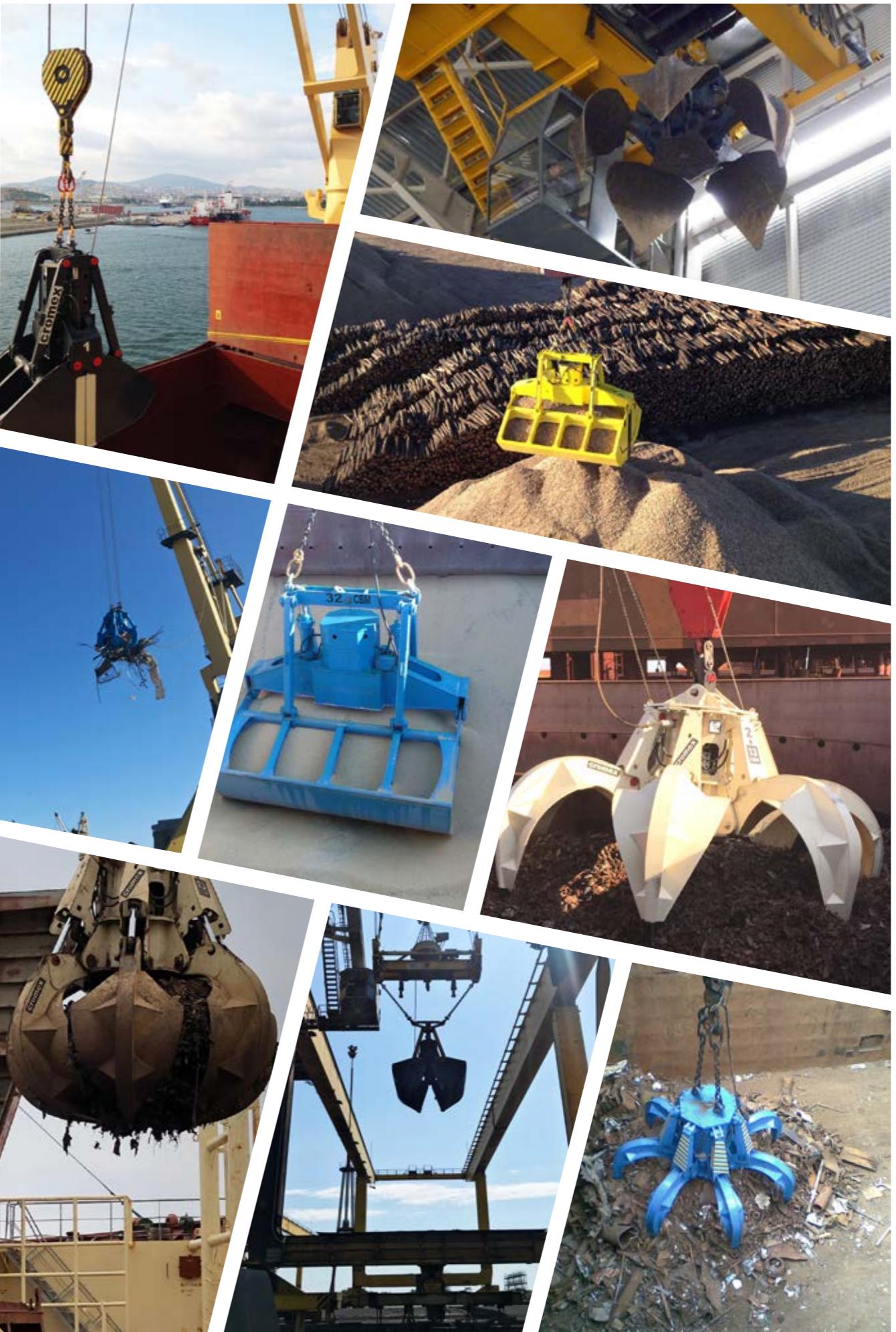
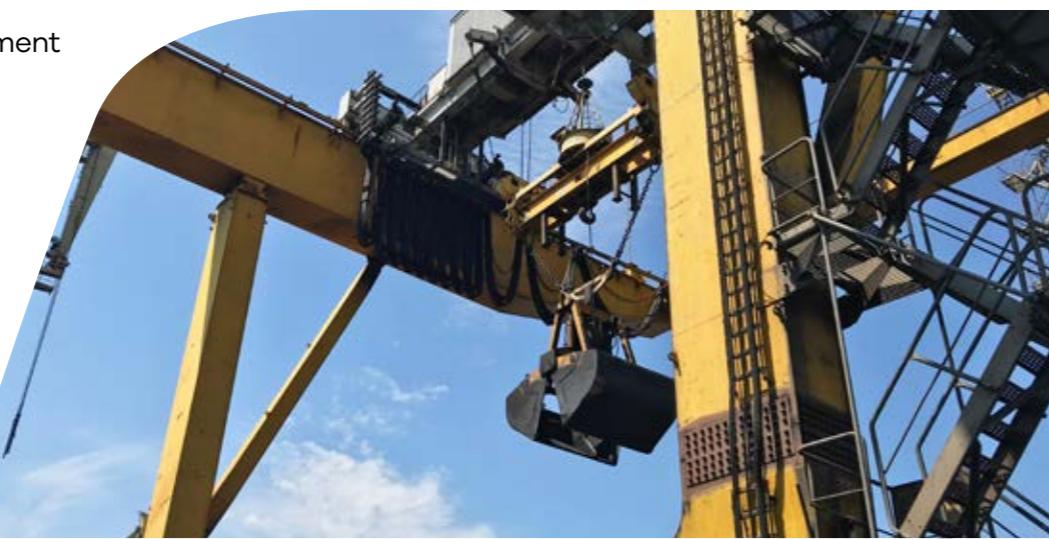
ELECTRO - HYDRAULIC GRAB

ELECTRO-HYDRAULIC

Electro-Hydraulic Grabs are specially designed to handle bulk material with on single-drum cranes. The handling performance of Electro-Hydraulic Grabs, is depending on the supplied electric power, converted by hydraulic pumps on the grab. Therefore, they require electricity from the crane or a source at shore. Also additional equipment and accessories such as cable-reels, pulleys and a control panel must be installed on the vessel. The control panel comes with options to have Radio Remote Control, Foot Pedal Control or both. If on the chartered vessel it is not allowed to mount accessories on the cranes, a 'deck tower' is also a good alternative. Electro-Hydraulic Grabs are mostly preferred if higher closing forces are required or working space has limited draft. For EOT Crane applications with smaller capacities, contact our sales office to get information on the new **SWITCH** Series.

EH GRAB

- High closing forces
- Control Panel
- Radio Remote Control
- Foot Pedal
- Robust Structure
- Additional Equipment
- Control Panel
- Cable-Reel
- Deck Tower



PORT EQUIPMENT

Port Hopper

Specifically designed for unloading bulk cargo into trucks or bagging, our port hoppers can be manufactured up to 100 cbm and alternatively designed to be modular for transportation at all capacities. Depending on demand extra features like PLC control system for sensor weighters, light and sound warnings, wheels, environmental dust covers, hydraulic or mechanical flaps and other special requirements can be added.

Deck Tower (Automatic Cable-Reel)

If on the chartered vessel it is not allowed to mount accessories on the cranes, the deck tower is a good alternative. Placing this device on deck and connecting it to a Electro-Hydraulic Grab will be enough to start operating. Deck Towers guide the electrical power cable from the vessel or generator to the grab and keep the cable under constant tension. It is possible to work with either power from the vessel or a powersource from shore. Operation can be with Remote Control Panel and/or Foot Pedal.

Mobile Shiploader

The mobile shiploading conveyors can be adapted to all types of products. On demand, they can be optimized for the handling of agricultural products such as cereals and maize. Or it can be used to load various minerals, rubble, wood, and de-icing salts and silica sands. The conveyors vary in length from 6 to 55 m and operate with an electric motor. In addition to the motor, you can choose the feed and type of product outlet (swivel spout, swan-neck). These characteristics enable them to achieve high performances in the handling of bulk products. The output can vary from 60 to 400 tons per hour depending upon the type of bulk product transported and the version of bulk conveyor selected. Performances that you can harness for various uses. You can optimize the loading of a truck, boat, barge or even containers. They can also be useful to you for filling storage bins and storage buildings.

Overheight Frame

The Overheight Frame is a great tool which improves productivity and time efficiency during operations when handling Open Top Containers, Flat Racks and Over-Sized Cargo in general. At the same time it increases significantly the security of the stevedores in those operations. Types available are Mechanical, Semi-Automatic, Fully-Automatic (electrical).



INSPECTION, REPAIR AND ASSEMBLY

RESPOND FAST, REACH WORLDWIDE, MASTER THE SITUATION

Assembly And Installation

Sometimes you might need your grabs to be delivered disassembled. The reasons could be: high transportation costs, the lack of equipment for overheight cargo at delivery destination or you want us to come for training and commissioning. In any of these cases, our team is available for assembly and installation.

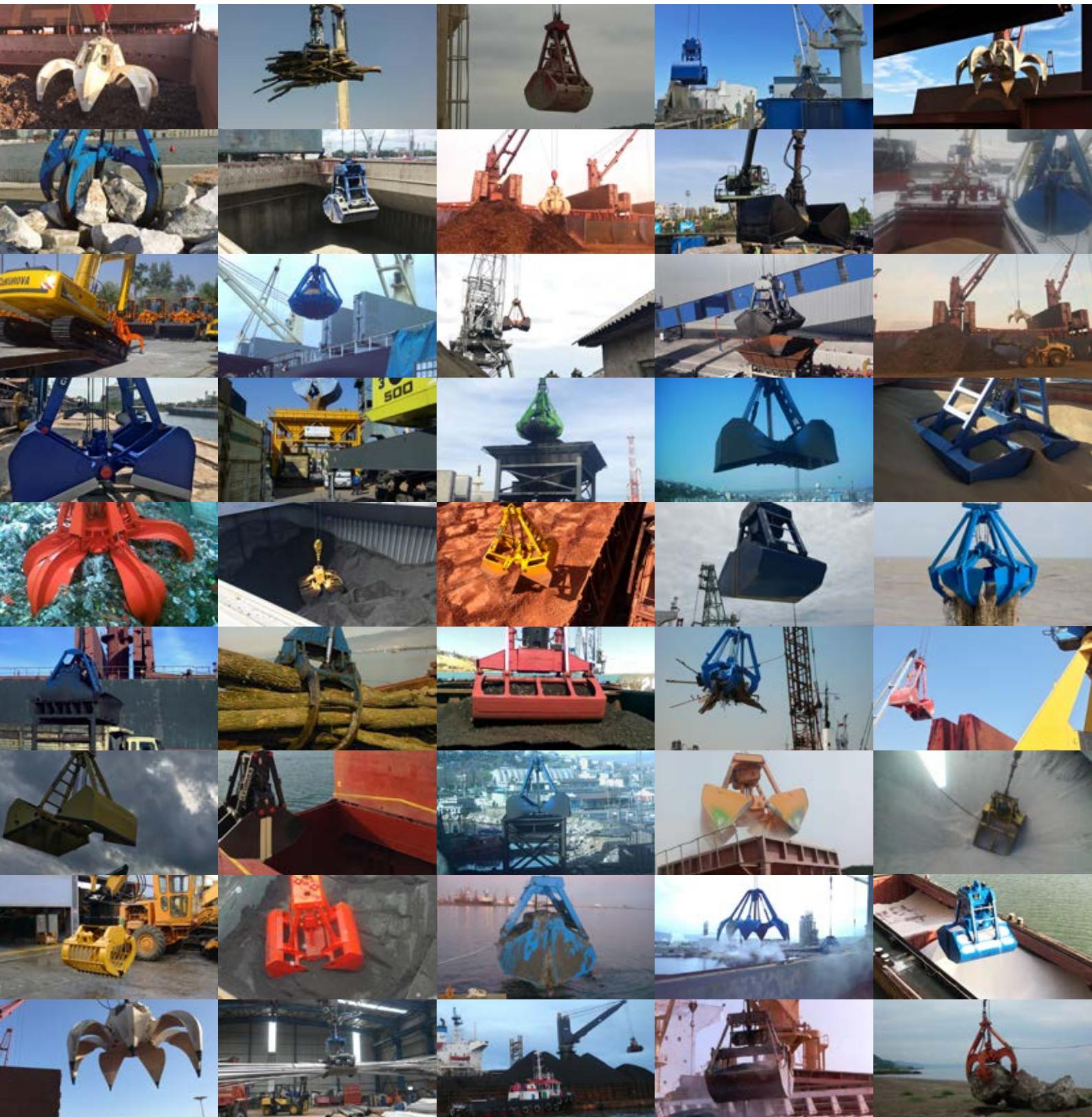
Commissioning And Training

In addition we can train your staff if they are unfamiliar with the provided equipment. Both theoretical and practical training can be provided during commissioning or separately on demand.

Inspection and Repair

Continuity of operations is critical. Operational disruptions are costly, not only for shipowners but also for other key players in the supply chain. Whether it's a Cromex Grab or another brand, to help you out, we are always available to assist vessels and ports worldwide 24 hours a day, 365 days a year.





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