

# Cranes for all ship types



**MACGREGOR**

Designed to perform with the sea

# Shipping is your business, cargo handling is ours

## Experience that adds value

More than 13,000 MacGregor cranes have been delivered over the past 55 years. Advanced designs and user-friendly operation are some of their key elements.

MacGregor's deck cranes are the safest, most efficient and productive marine cargo cranes on the market today and operate on ships throughout the world.

## Whatever the ship type

There are MacGregor cranes to suit every type of vessel and cargo handling duty, whether your ship is a bulk carrier, container vessel, general cargo ship, tanker or another type of vessel.

By installing MacGregor cranes, you have a wide range of extra features, accessories and tools available for you to choose from to suit your ship type. You also have the full support of MacGregor's worldwide service network to keep you up and running.

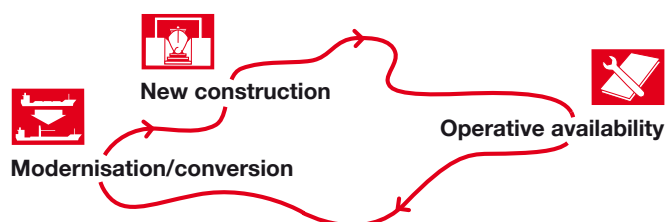
## Partners in production

Offering clear logistical benefits for shipowners and shipyards, MacGregor cranes are manufactured by carefully selected and approved production partners in China and Korea. MacGregor provides conceptual know-how, design, key components, continuous production supervision and rigorous quality control and testing. Our experience of partner production started already back in the 1960's.

## Support throughout your ship's lifetime

Our aim is to add value to your business throughout the lifetime of your ship. Starting at the newbuilding stage, our naval architects help you develop an optimal vessel design for a specific operational profile. This is achieved by designing integrated cargo flow systems with customised features. Once the ship is in service, MacGregor provides lifetime support in the form of maintenance and service solutions that ensure optimum equipment availability.

Later in your ship's life-cycle, our modernisation and conversion programmes help you get even more from your investment by optimising performance to match current market needs.





# The widest range of cranes on the market

MacGregor's extensive portfolio of cranes is unmatched by any other manufacturer. We offer standard cranes with safe working loads from 3 to 100 tonnes and heavy lift cranes up over 500 tonnes. Connected in twin and/or team modes, the cranes can handle two/four times the safe working load of a single crane.

## **Computerised control systems**

The MacGregor micro-computer-based crane control system offers programmed crane control, load statistics, remote communication to portable PC, remote control and a range of other features.

## **Environmentally-sustainable solutions**

Shipping companies and shipyards have appreciated their value: environmentally sustainable ships are both economical and competitive.



# GL/GLE crane



Applications: Cargo handling on container ships, bulk carriers and general cargo ships.  
Variable frequency drive (VFD) or electro-hydraulic drive.

Hoisting capacity:	25–100t
Jib radius:	20–44m
Hoisting speed:	19–50 m/min

# GLH/GLHE crane



Applications: Handling heavy and multi-purpose cargoes on general cargo ships.  
Variable frequency drive (VFD) or electro-hydraulic drive.

Capacity main hoist	100–over 500t
Capacity auxiliary hoist:	35–60t
Jib radius:	20–36m

# GLB/GLBE crane



Applications: Bulk handling on bulk carriers and multi-purpose ships.  
Variable frequency drive (VFD) or electro-hydraulic drive.

Hoisting capacity:	25–45t
Jib radius:	18–32m
Hoisting speed:	18–50 m/min

# LC/LCS crane



Applications: Cargo handling on container ships, reefers and general cargo ships. Low built.

Hoisting capacity:	36–45t
Jib radius:	20–34m
Hoisting speed:	21–41 m/min



# K4 crane (four-rope grab crane)



Applications: Cargo handling on bulk carriers and transloading. Our toughest crane in terms of turnover, heavy duty operation and working environment.

Hoisting capacity:	25–50t
Jib radius:	20–36m
Hoisting speed:	50–80 m/min

# Lattice Boom Crane



Applications: designed for installation on floating or fixed platforms. Heavy offshore operation in compliance with the 7th edition of API-2C.

Hoisting capacity:	50-300t
Capacity auxiliary hoist:	30t
Jib radius:	50m

# HH crane



Applications: Hose handling on tankers. A safe, reliable and explosion-proof crane.

Hoisting capacity:	3–25t
Jib radius:	8–24m
Hoisting speed:	10–30 m/min

# GP crane



Applications: Safe, reliable handling of spares and provisions on all type of vessels and for handling free-fall boats.

Hoisting capacity:	3–25t
Jib radius:	8–24m
Hoisting speed:	10–30 m/min

# MacGregor crane control system CC3000

The crane safety system includes a well-proven and very reliable MacGregor crane control system.

- The safety system includes a display located in the cabin, the 'Mac-Heavyvisor'. It gives the driver information about current hook load, hoisting speed and outreach, and other information from the crane control system. The display can also show list and trim in degrees (optional).
- The primary software-based safety system is connected to load cells, encoders and transmitters and also has a degree of redundancy.

- Information shown on the display for each crane can be transmitted via the slip ring device, through a cable, to a PC in the ship's office or the bridge. This makes it easy for the chief officer to have excellent control of a team lift operation, for example.
- The crane display is also used for logging crane operation.
- The CC3000 is type-approved by DNV GL, which tested critical hardware and software components.



## Human Machine Interface (HMI)

### MacGregor Crane Information System



Real-time information on active systems

Load/speed/outreach information

Logs information for analysis

Errors/warnings/events

Touchscreen display

MacGregor VFD cranes





## Accessories and extras

MacGregor cranes can easily be furnished with a variety of extra equipment to improve overall visibility, reliability and performance.

Examples from the huge range of optional extras that are available from MacGregor include spreader and grab handling equipment and programmed controlled cargo spotting to improve cargo handling efficiency and reduce cargo damage.

### Optional extras

- Air-conditioning
- Anti-collision system, static, dynamic and 3D
- Auto team (one driver for two cranes)
- Active Pendulation Control (APC)
- Active Rotation Control for power swivel (ARC)
- Extra deck lights and warning lights
- Extra heaters
- Extra limit switches
- Stabilizing winch and cable winch
- Power limitation system on VFD cranes
- Power management system
- Remote control
- Spreader equipment
- Ships office display from cranes
- Team beams

*Electric power swivel with ARC*



## Lifetime value with MacGregor solutions

We provide you with efficient and reliable solutions for your cargo handling needs.

Cranes for all ship types and every cargo handling duty.

The crane housings are totally enclosed providing protection from the weather, corrosion and damage.

Modular designs enable us to provide the shortest possible lead times as well as top-of-the-line quality.

Modern cranes complying with international standards and regulations.

*MacGregors North Star*

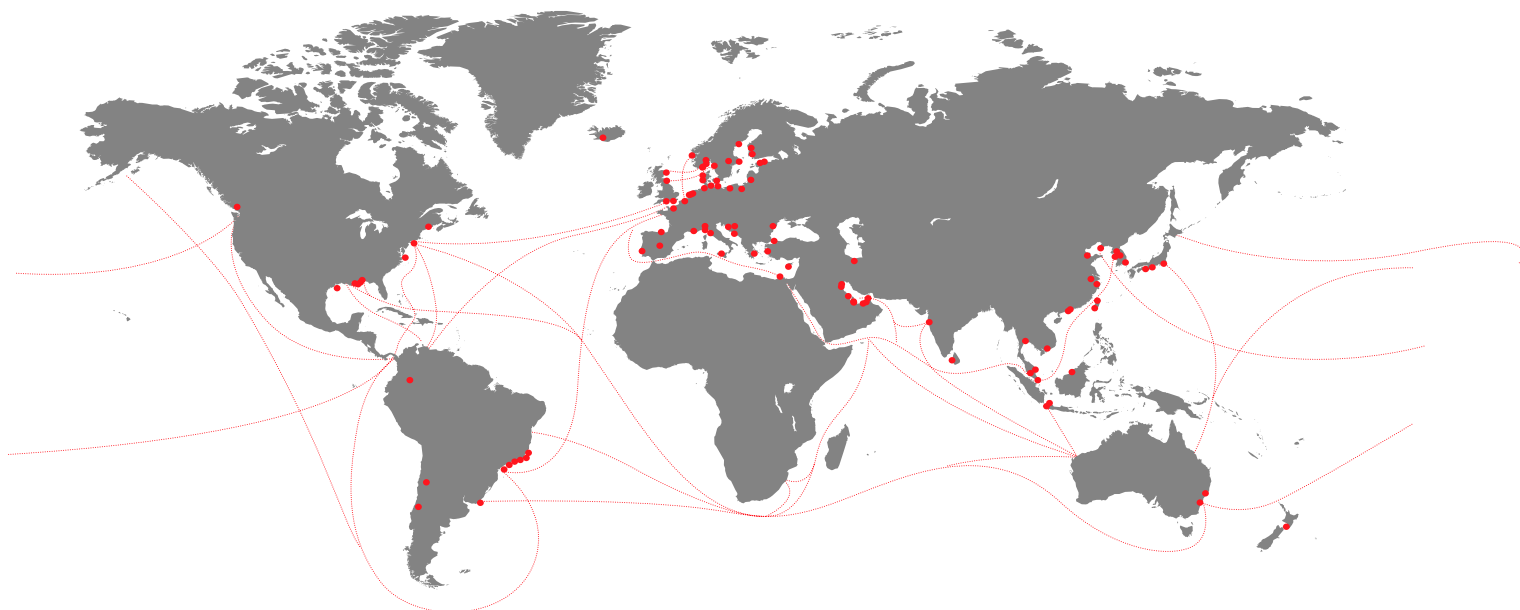


## Global service on a local basis

- MacGregor operates in more than 50 countries
- MacGregor service network consists of more than 60 stations in major ports around the globe
- Approximately 900 skilled MacGregor service professionals at your service
- Original MacGregor spare parts and repair services on a planned schedule, on demand and on emergency basis

Wherever needed, you can rely on our support.  
 We serve the following brands globally, and we also serve all others.

- |                       |                             |                                    |
|-----------------------|-----------------------------|------------------------------------|
| • Ankerlökken Marine  | • Hydramarine               | • MacGregor-Navire                 |
| • Allset              | • Häggglunds                | • Navire Cargo Gear                |
| • ASCA                | • KGW                       | • Nordströms                       |
| • Becker              | • KYB - ASCA                | • Ozean Service & Reparatur        |
| • BMH                 | • KYB - Kayaba Industries / | • Platform Crane Services (PCS)    |
| • Conver-OSR          | Navire Cargo Gear           | • Plimsoll                         |
| • Grampian Hydraulics | • Luezhoe                   | • Pusnes                           |
| • Flintstone          | • MacGregor                 | • Porsgrunn                        |
| • Greer Marine        | • MacGregor-Conver          | • Triplex                          |
| • Hamworthy           | • MacGregor-Häggglunds      | • Vestnorsk Hydraulikservice (VNH) |
| • Hatlapa             | • MacGregor-Kayaba          |                                    |



MacGregor shapes the offshore and marine industries by offering world-leading engineering solutions and services with a strong portfolio of MacGregor, Hatlapa, Porsgrunn, Pusnes and Triplex brands. Shipbuilders, owners and operators are able to optimise the lifetime profitability, safety, reliability and environmental sustainability of their operations by working in close cooperation with MacGregor.

MacGregor solutions and services for handling marine cargoes, vessel operations, offshore loads, crude/LNG transfer and offshore mooring are all *designed to perform with the sea*.

*MacGregor is part of Cargotec (Nasdaq Helsinki: CGCBV).*

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