



# Meet Gloria

The next generation of productivity.



**KALMAR**

# Kalmar – Home of the original reachstacker.

Wherever in the world cargo is on the move, Kalmar is there. As a pioneer and world leader in cargo handling solutions, no one has been working as hard – or as long – at keeping your business ahead of the rest.

Nearly thirty years ago, in Lidhult, Sweden, we built the world's first commercial reachstacker. Based on the idea that containers could be handled more flexibly, with higher stacking, deeper reach and improved storage capacity, the concept soon became a worldwide success. It marked a new standard in operational efficiency and reliability: one that continues to this day with one of the world's oldest operating reachstackers. Delivered in 1990, it's a machine that is still running strong in Guangzhou, China, after 40,000 hours on the job – and counting.

The industry has come a long way since those early days. Tougher schedules. Tighter margins. Stricter regulations. Driven by these demands, and based on our experience with more than 7,500 machines in more than 160 countries, we've continued to create total solutions that support some of the toughest jobs in the world. Throughout it all, our focus has remained the same: deliver top-quality, innovative products that strengthen your business every day.

Now, with our newest series of Kalmar reachstackers, generations of hard work are once again paying off for our customers. The result is yet another leap forward in productivity, and our most comfortable, most efficient reachstacker to date.





Drivers call it the next level of performance.

# We call her Gloria.

The Generation G reachstacker is the outcome of more than a decade of advances in operating efficiency. Through extensive testing with operators, maintenance personnel, production and terminal managers around the world, we were determined to improve every detail to better meet the needs of today's cargo handlers.

The challenges were immense. They involved tackling an endless range of user demands with the help of leading industrial designers, modular components and the latest research into ergonomics, usability and materials science.

The goal, however, was quite straightforward: to create a machine that is reliable enough to build on the success of the Generation F, but innovative enough to achieve new levels of operator safety and productivity. A machine that is simply more enjoyable and more profitable to own.

Meet Gloria – a new reachstacker for a new generation.

# Performance with a panorama view.

At the heart of every great machine lies a great cab. After all, the more ergonomic and intuitive your workspace is, the more you can get done at the end of the day. This is why we've once again decided to give our operators the most productive operating environment in the industry: the all-new EGO cabin.

## Re-engineered from the inside out.

Safe, comfortable and easier than ever to control, the EGO is completely re-engineered to put as little as possible

between you as an operator, and the load at hand. Vision is uninhibited. A patented side-tilting wheel enables new steering possibilities. And an

improved, ergonomically designed joystick stays firmly secured in position for smoother, safer gear changes.

## All eyes ahead

The EGO cabin brings out the best in any driver. From carefully laid out new controls, pedals and displays to the nearly seamless visibility of the curved windscreen, everything remains in sight and within easy reach – both inside and out. All so you can move more tonnes, more safely, with complete focus on the job ahead.

## Wired for performance

All Generation G machines are equipped with the newly developed Kalmar

electrical control system, an integrated information system that allows operators, managers and service personnel to monitor nearly every aspect of their machine's performance. It's a wealth of real-time data that amounts to faster, more reliable operations, with less downtime.

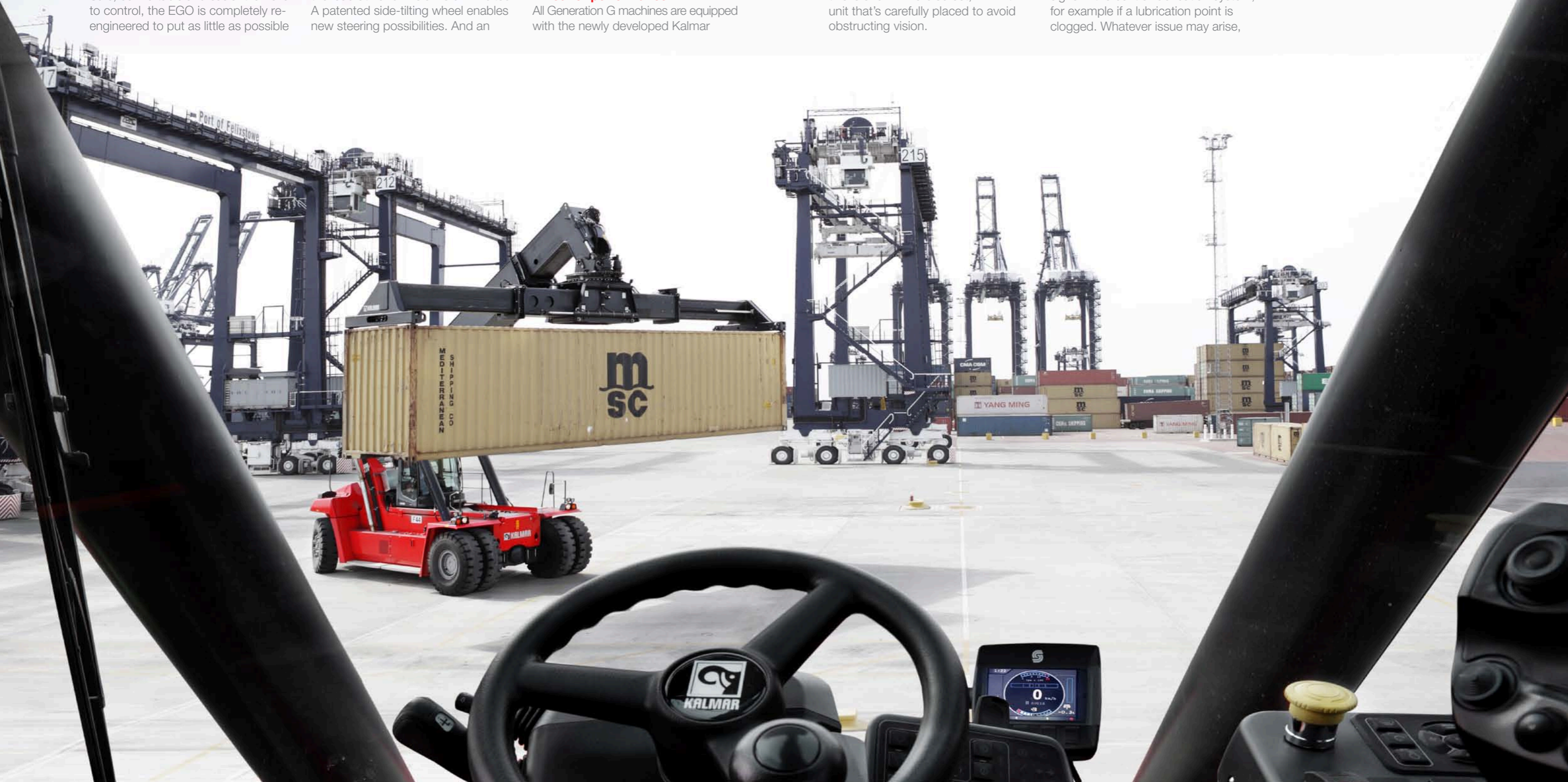
## Intuitive Head Up display

The intuitive integrated Head Up display allows you to monitor your load as symbols shift from green, to yellow, to red, showing the twist-lock and support jacks status. All of this is shown in a discreet, LED-lit unit that's carefully placed to avoid obstructing vision.

## Advanced operator diagnostics

On top of saving countless hours on manual tasks and equipment checks, the Kalmar Information Display keeps operators better informed about their machine's status from the safety of the driver's position. It simplifies daily checkups and provides valuable statistics such as error history, fuel consumption, distance and operating hours. Need to perform a daily lights check? You can turn them all on with the press of a button. Concerned about your machine's lubrication? The display will alert you to any warning signs in the central lubrication system, for example if a lubrication point is clogged. Whatever issue may arise,

an on-screen code will guide you in your operator's manual. In this way, diagnostics can be performed without ever stepping out of the cab, and without ever again needing assistance to check something as simple as a brake light.





# Keeping your business on the move.

When it comes to delivering lifetime value, the Generation G reachstacker excels on all fronts. It starts with the top-quality design and materials that Kalmar is known for, and continues with a range of intelligent new features that keep your cost of operation to a bare minimum. Together with our unparalleled global support and service network, the Generation G ensures efficient, reliable operations – day in and day out – for years to come.

#### **SmartPort Automation drives efficiency**

Kalmar SmartPort process automation solutions offer a sophisticated, yet simplified way to boost the efficiency of your reachstacker operations. By capturing information and optimising its flow within your business processes, it ensures the most efficient equipment utilization at all times. Solutions include SmartStack, SmartLift and SmartFleet, all of which provide fast, accessible and immediate productivity improvements for a relatively small initial investment. These process automation solutions are designed to fit any size of terminal, brand of equipment and TOS.

# An elevation in uptime.

The Generation F reachstacker, already a leader in uptime, has finally met its match. With the Generation G, we've managed to boost performance once again with improved operator interfaces and newly designed integrated components. The result? Simplified maintenance, fewer faults and a major increase in service intervals.

## Improved component integration

Under the hood, the Generation G has taken a big leap forward in component integration and construction, thanks to close collaboration between Kalmar's R&D and service staff in the development of the new series. Segmented wires, for instance, make maintenance and replacement simpler. And with fewer exposed components, and therefore less wear on wiring, hydraulics and other connectors, you can keep your machine on the job longer with minimal service stops.

## Proactive monitoring

With fewer connection points and wires, the new electrical control system ensures fewer faults and dramatically simplifies diagnostics, service and configuration. The electronics are based on a unique distributed and redundant CAN-bus technology, which Kalmar is the only supplier in the world to provide as standard. It automatically locates failures, compensating with backup bus wires and connectors before the fault can affect your machine. Since an individual electrical component and its backup very rarely fail together, the result is a highly reliable self-correcting system.

## Longer service life

The first service, to be performed after 500 hours rather than today's 50

hours, offers cost savings of more than 10% within 2,000 hours of operation. The first hydraulic oil sample is taken after 4,000 hours and checked again after each additional 1,000 hours, making the span between oil changes longer than ever before. Other major service intervals – including drive axle oil, servo filter and oil in rotation motor spreaders – have also been doubled, from 500 to 1,000 hours. Combined with a global service and after-sales network that is second to none, these improvements make the Generation G a new frontrunner in non-stop productivity.

## Easy serviceability

Like the Generation F, top covers on the frame can be quickly removed for easy maintenance of most main components. To further improve service access, the servo filter has been moved more closely to the high-pressure filters beneath the frame, while the fine filter has been moved to the outside of the frame. This optimised accessibility is part of an ongoing effort to ensure that every machine we build is as easy to serve as it is to operate.





## Fuel economy made simple.

Whether you're striving to save on fuel or meet tough emissions standards, the objectives are the same: to consistently reduce waste and increase operational efficiency. Thanks to a range of smart functions and driver training programmes, operators get all the assistance they need to minimise fuel costs whilst meeting even the strictest environmental regulations.

### Kalmar EDM (Eco Drive Modes)

The Generation G allows you to choose from among three different driving modes, each optimised to meet the needs of your business. For maximum performance, measured in tonnes moved per hour, choose Power mode. For higher profitability, with up to 10% fuel savings per tonne of cargo, choose Normal mode. And when total cost of operations outweighs the need for performance, Economy mode allows you to save even more fuel per hour, with up to 20% in reduced fuel consumption.

### Automatic engine shutdown

This optional feature, which can be programmed for any time interval you choose, allows you to decide exactly when your vehicle should shut down when not in motion. Set it for ten seconds, for example, and your engine will automatically turn off after ten seconds of idling. This allows you to effortlessly reduce fuel costs, component wear and environmental impact.

### Optional start/stop function

An optional start/stop function can also be added to automatically activate and deactivate the machine. In addition to reducing unnecessary emissions and extending the lifespan of components, this makes it possible to achieve up to 10% in fuel savings.

### Optional tyre pressure monitoring

Maintaining optimal tyre pressure is an important safety measure. But it's also critical to saving fuel and preserving the condition of your tyres whilst protecting the environment. This is why the Generation G now offers an optional integrated tyre pressure monitoring system that gives the operator constant updates on the pressure of each individually monitored tyre. It's an effective way to prevent blowouts whilst ensuring that operators have greater control over another key factor in fuel efficiency.

### Efficient LED lighting

Lighting is another area where the Generation G cuts down on energy consumption. LED lights are now

standard features throughout the machine, for example in all cabin switches and indicator lamps, the boom's rotating beacon, and the twist lock indicators on the boom nose, chassis and Head Up display. Each light has a life span of up to 30,000 hours, which is an exponential increase in efficiency over standard lighting.

### EcoDriving from Kalmar Training Academy

In the end, the true value of your machine depends largely on the skills of the operator behind the wheel. This is especially true when it comes to saving fuel, and Kalmar is dedicated to helping you make a greater impact. Our EcoDriving concept focuses on training operators with new techniques that can make a valuable contribution to extending component life, reducing wear and tear on tyres, minimising maintenance costs and reducing fuel consumption by up to 30%. To help you get the most from your machine, the content of these and other courses can be tailored exactly to the needs of your business and its operators.

## Service when it matters most.

Whether it's sub-zero temperatures or monsoon rains, the cargo handling business is anything but predictable. More than just having the right equipment, it's about always being prepared. For the development of the Generation G, this meant a close collaboration between factories, service technicians, support personnel and aftermarket staff – right from the start. The same is true for all Kalmar machines. It's what makes us fully prepared to provide rapid support for the entire life cycle of your machine, before it leaves the factory floor.

### Comprehensive support network

With Kalmar, you have the industry's most extensive support and after-sales network always at your disposal. This helps to ensure swift response for everything from spare parts and product support teams down to individual, local service technicians. After all, what

good is even the best equipment on the market if it's left standing still?

### Your profits are our pride

Our aim is to protect your investment, which is why our top priority is to minimise the costs of unnecessary downtime. It may be difficult to measure,

but it's a commitment that we believe keeps our customers coming back. It's also the reason that Kalmar reachstackers consistently maintain one of the highest resale values, with high-quality components and services that resist lifetime wear.



# The all-new operator experience.

In designing the new Generation G reach-stacker, our aim was to raise the operator's experience to new heights of safety, comfort and precision. Years of development and thousands of tests later, the result is an entirely new ergonomic environment – and a totally new driving experience. At the heart of it all is the cabin we call EGO.

## A better cab for better business

A safe, efficient driver is essential to our customers' success. In fact, it's fundamental to avoiding countless unnecessary costs, from downtime and cargo damage to unfocused and unhealthy drivers. As the leader in ergonomics, we at Kalmar left nothing to chance in creating the best cabin in the market. To do so, we took into account every aspect of driver comfort and performance within our control. This includes improved ergonomic controls and pedals, easy-to-use intuitive interfaces and a wide range of other refinements.

Step into the cabin, and all of these details merge to form a single, naturally productive working environment. Viewed from the adjustable driver's seat, the first thing you may notice is the near absence of blind spots due to subtly profiled beams and a new curved windscreen. Within comfortable reach are a new joystick, electronically adjustable working console and a patented

side-tilting steering wheel, all ergonomically designed to minimise fatigue whilst enabling optimal load handling possibilities.

Surrounding you in the cabin is a seamless operating environment tailor-made for efficient driving, with all instruments and monitors well placed and thoughtfully designed. For added comfort, as in the previous generation, a standard Electronic Climate Control (ECC) system keeps the temperature constant, and the air well circulated and filtered.

The combined effect is a fully controlled workspace that keeps you as an operator safer and more alert – with nothing standing between you and a productive day's work.

### Endless visibility

A totally new, open cabin design for optimised visibility at all angles. Smart profiles and curved windows combine to give exceptionally strong forward, diagonal and rearward visibility. The sensation is almost like working outdoors.

### High-capacity wiper

With over 90% curved windscreen drying surface, this horizontal wiper provides optimal visibility for higher productivity and safety.

### Ergonomic steering wheel

The patented new steering wheel is engineered to reduce stress and increase productivity through carefully tested ergonomic design. It's not only adjustable, but can also be tilted at an angle to the side for comfortable manoeuvring in any situation.

### Comfort pedals

A new, flexible and fail-safe pedal system with adjustable pedal angles for minimal strain on the foot. A floor-based solution with a hanging pedal feel, so you can keep driving hard with less fatigue.

### New patented joystick

The new joystick with built-in gear knob is designed to improve driving efficiency. It is optimised for maximum lifting capacity and ergonomically enhanced to reduce arm fatigue.

### Work console

The operator's extended arm, it's easy to adjust, easy to use and simple to understand. Here you'll find all the controls, switches and indicators necessary for efficient operation, in a flexible and ergonomic design. The console consists of clear, well-placed panels as well as controls for data display and machine control systems.

### Adjustable multi-seat

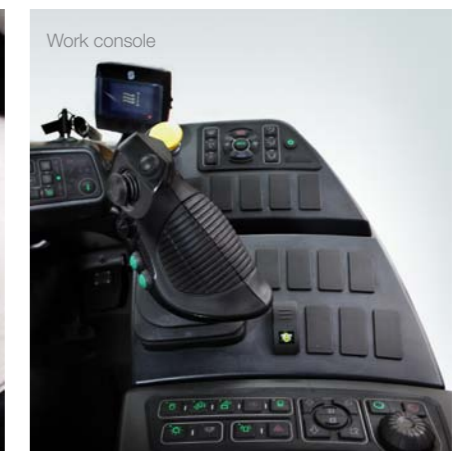
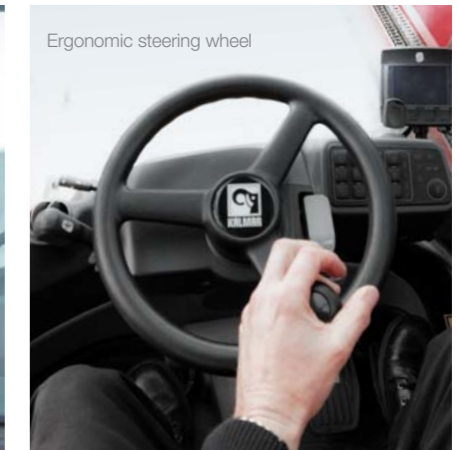
The fully integrated Kalmar seat has been carefully developed to ensure the best possible comfort and sitting posture for long shifts and demanding operations.

### Climate package

A complete, flexible climate package that stands up to the high demands of the climate-tested EGO cabin. Large air intakes mean easy filter replacement in the front, whilst well dimensioned and carefully designed components provide superior interior comfort.

### Intuitive interfaces

An enormous amount of groundwork has helped to raise the human-machine interface (HMI) to a new level. This includes sight, sound, touch, spatial sense and intuition, all in one logical, balanced and user-friendly design. At the centre of it all is the 3.5" Kalmar Information Display, now in color.





# Standard features and options.

The basic model of the Generation G is generously equipped with dozens of new features. In addition to a number of customisable cabin features, you can also adapt your Generation G reachstacker with an endless array of options and attachments for different segment applications.

The Generation G is available in 6, 6.5, 7 and 7.5 metre wheelbases. The machine platform is prepared for 3A, 3B and stage 4/Tier 4 Final, depending on national markets.

To find out more, contact your local Kalmar dealer or visit [www.kalmarglobal.com](http://www.kalmarglobal.com)

## Example of standard features included:

### EGO cabin

- Patented side-tilting steering wheel
- Newly designed ergonomic joystick
- Optimised windscreen with maximum visibility
- Tinted/laminated windscreen (front pane)
- High-capacity horizontal wipers
- Ergonomic comfort pedals with adjustable angle
- Head Up display with LED indicator
- Adjustable multi-seat
- HMI Human-Machine Interface
- ECC climate package

### Electrical

- New Kalmar electrical control system
- LED lights (Head Up display, twist locks, rotating beacon on boom, rear/brake parking lights, blinker light and switches and all in-cabin switches and indicators)
- Electrical Redundant CAN-bus system

## Fuel, oil and coolant

- Engine oil and coolant level sensors on Volvo engines
- Variable hydraulic pumps
- Temperature-controlled cooling fan for oil
- Eco Drive Modes: Power mode, Normal mode and Economy mode

## New optional features include:

- Tyre air pressure control
- Start/stop function
- Reverse warning system
- Kalmar Personal Proximity System

Kalmar offers the widest range of cargo handling solutions and services to ports, terminals, distribution centres and to heavy industry. Kalmar is the industry forerunner in terminal automation and in energy efficient container handling, with one in four container movements around the globe being handled by a Kalmar solution. Through its extensive product portfolio, global service network and ability to enable a seamless integration of different terminal processes, Kalmar improves the efficiency of every move. [www.kalmarglobal.com](http://www.kalmarglobal.com)



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