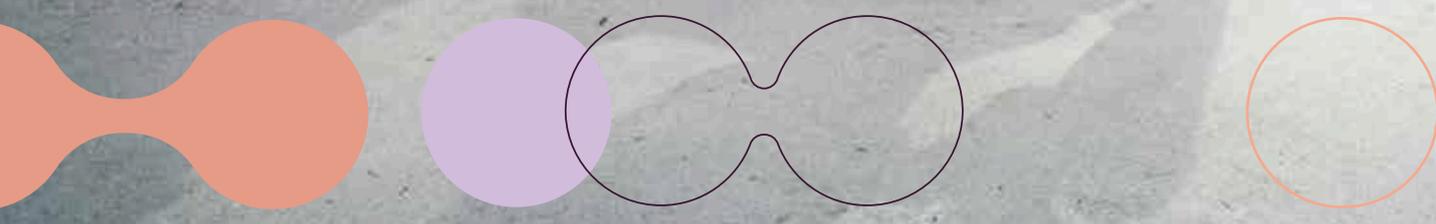
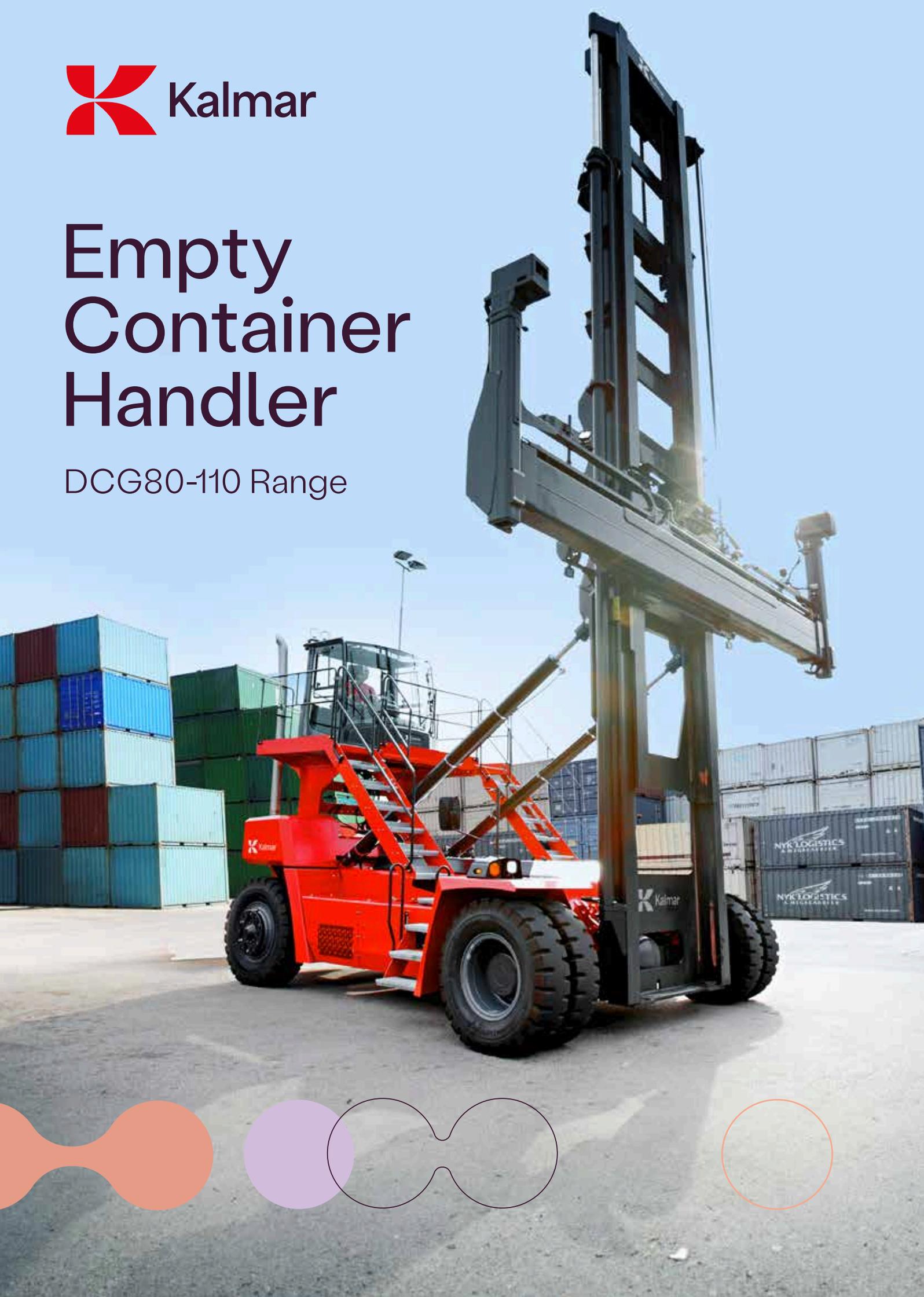




Empty Container Handler

DCG80-110 Range



More for you

Our extensive range of Kalmar empty container handlers offer you more than they ever have before, which means you get more for your money.

The market's largest range

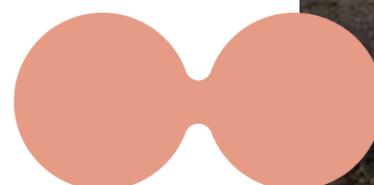
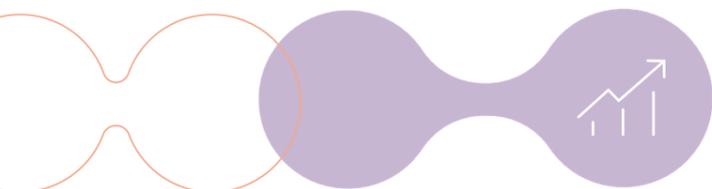
You get more choice of machines, with a range of single stackers in 8, 9, 10 and 11 tonne capacities and lifting heights from 4 to 8-high. Double stackers are available in 10 and 11 tonne capacities, with stacking heights from 4+1 to 8+1-high. Plus, a greater choice of drive lines and performance levels that you can match to your individual needs. More comfort for your drivers, as all of our new range comes with our state of the art EGO Cabin, which can be situated in either a high or low position on the chassis.

A more robust and efficient range, with the highest lifting and lowering rates and dramatically reduced running costs per move. Plus easier access for service and maintenance and more options across the whole range to choose from than ever before.

No matter how you look at it, the new range of Kalmar empty container handlers gives you more.

Expect nothing less

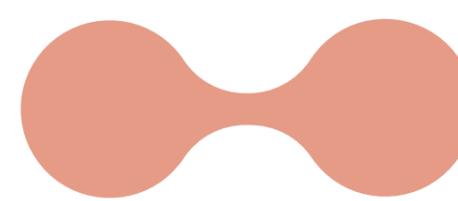
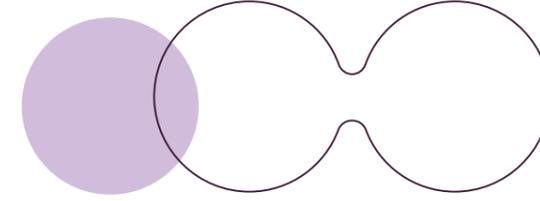
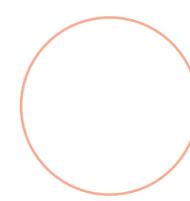
With nearly 10,000 empty container handlers built to our high standards over the last 30 years, it's no surprise that 1000's of them are still in operation today. In fact over 90% of our customers say they would repurchase a Kalmar empty container handler again, primarily for their superior durability and reliability and the local Kalmar support and service network.



The operability and control of the Kalmar Empty Container Handler is extremely good. It's agile, suitable for any empty container yard.

Zhang Lin, Operator at NingBo Beilun, International Container Terminals Ltd.

More across the entire range



More options

Now more safety features and options to customise your machine than ever before. From reverse warning systems to a range of different power sources and spreaders.

More return

Higher productivity with zero emissions at source means a greener, lower cost per move. Longer servicing intervals with easier access for service and maintenance, saving you time and money. Plus, the highest re-sale values in the market.

More robust

Built on our proven G-Generation platform you get a stronger chassis with high and rear mounted cylinder package for improved stability and toughness. You also get upgraded drive axles with oil-cooled wet disc brakes and a wider rear steer for greater stability when lifting heavy loads to heights.



Double stackers, up to 11 tonnes, high mounted cabin.

More choice

You can choose from either a single stacker with two lifting capacities or a double stacker with two lifting capacities. There are 4 different cabin offerings, with low or high mounting and the choice of single or dual access stairways. All machines can be equipped with mechanical or hydraulic side tilt or pile slope and there are 6 spreader choices.

More efficient

Proven, powerful and efficient drive lines in both medium and high performance versions with 3 or 4 speed fully automatic transmissions and a choice of engines that meet current emission standards (EU stage 3-4-5 / EPA Tier 3 and 4F). The added efficiency of standard load sensing hydraulics (power-on-demand) and a choice of options for greater fuel efficiency including Eco Drive Modes, Stop/Start technology and a Tyre Pressure Monitoring System.

More comfort

Our EGO cabin with multi-functional joystick or linear lift levers is ergonomically designed and provides an extremely quiet working environment and improved visibility in all directions. Plus, a new tilt cylinder design for greater stability and control.

More safety

Kalmar smart controls include several important safety functions as standard. The overload protection system offers safety information with the container weight in the main display, including warnings and pop-up messages. There is also a mechanical mast tilt indicator on the tilt cylinder and a transport position striping in the mast for additional driver and operational safety.



Single stackers, up to 11 tonnes, low mounted cabin.

More choice

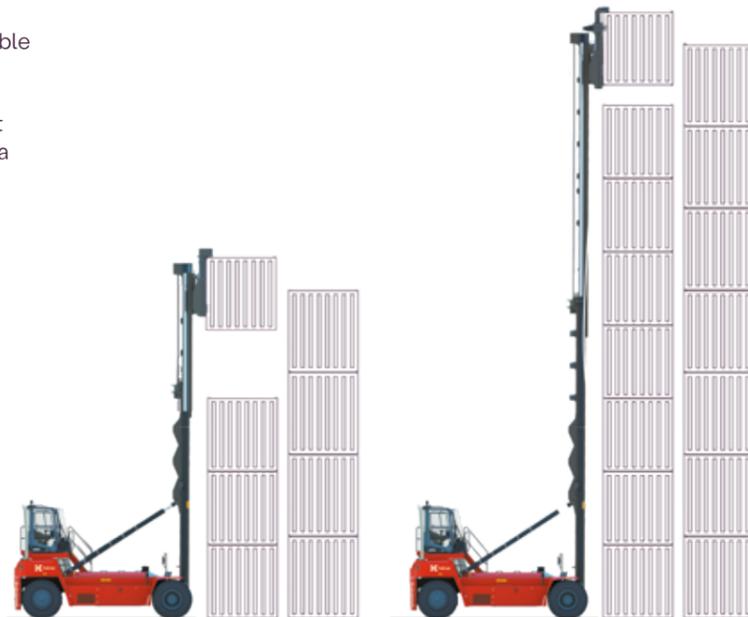
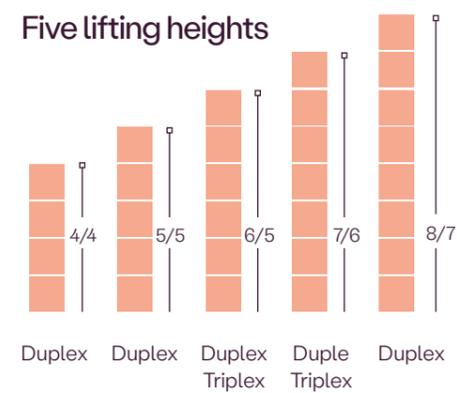
Choose from six different machines depending on your needs. The single stackers are available in 8, 9, 10 and 11 tonne capacities and the double stackers in 10 and 11 tonne models. Both ranges share the same main components and performance levels.

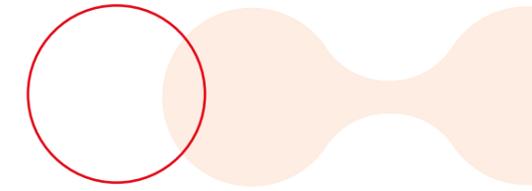
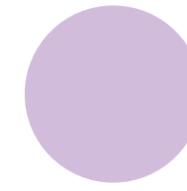
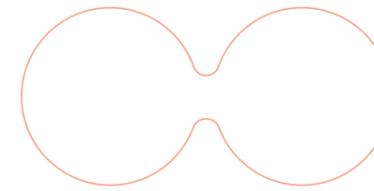
A choice of lifting heights

We have five different duplex mast heights (2-stage) to choose from, which give you the ability to stack from 4-high up to 8+1-high.

You can choose from 4/4-high up to 8/7-high (stacking heights) for the containers sizes of 8'6" / 9'6" and you can handle one container higher with our double stacker as you are able to carry your containers "1 over 1". Plus, we offer a low-built triplex mast (3-stage) which will allow you to operate in height restricted areas or when you need to drive inside a factory.

Five lifting heights





A choice of spreaders

The first thing you need to do is know what sort of containers you will be handling, then you can decide what sort of lifting head / spreader version you will need on your single or double spreader.

For single stacker toplift spreaders you can choose from lifting heads with either a standard twistlock position (8' wide) for ISO containers or a wide twistlock position (8'6") and / or wide body containers (WBC / 8'6" wide).

For double stacker sidelift spreaders there are four choices:

1. Side lift hooks and hydraulic side clamps for single lifting of 20-53' or double lifting of 20-40' containers
2. Lift head with hooks-n-clamps including additional safety wedge, that will lock single containers of 45-53' length.
3. The C-shaped hook-n-clamp spreader from the DCF series
4. ELME 582 spreader with dual sidelift twistlocks, for tight stacking.

A choice of spreader and lift beam levelling

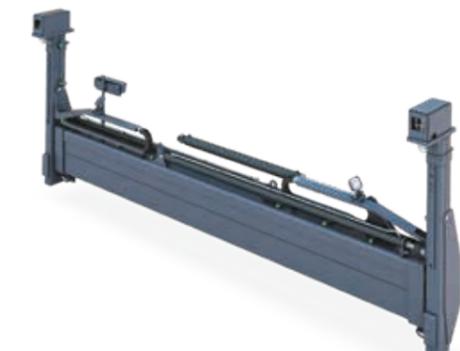
All machines, most designs and spreaders come with two different solutions for spreader carriage and lifting heads.

Choose from either:

1. A standard mechanical end beam levelling carriage (MPS, mechanical pile slope, stroke 0-250 mm)
2. Or the optional combined hydraulic pile slope (HPS ± 5 deg) and mechanical pile slope functions.

These solutions are ideal for operating on uneven grounds and poor yard conditions or when loading handling containers onto tilting trailers.

4 lifting capacities



To us, Kalmar offers the best machines. It's the safest truck we've used. Kalmar also offers excellent service support.

He Jianguo. Container Handler Unit leader, G-Fortune (Ningbo) Company.

More comfort, extra smart



Every member of our empty container handler range comes fitted with our EGO cabin, the ultimate operating environment for your driver.

With a more ergonomic design, smarter functions and an intuitive workspace than ever before, you can expect to get more from your operators.

More to see

With A-posts being replaced with slim B-posts you can expect greater visibility in all directions: forward, backward, to the side and upwards. Our new dual wiper system cleans a bigger area of the front windscreen than before so your forward view will stay extra clean and clear.



More comfortable

With a choice of comfortable driver seats, a fault safe pedal system and powerful Electronic Climate Control (ECC) system with smarter controls your operator will benefit from improved ventilation heating and cooling, plus a cabin with superior comfort and lowest noise level inside and outside.

Easy to operate

With a wide choice of joysticks or lifting levers, an electronically adjustable work console and side tilt steering wheel they are designed for ease of operation, making them more efficient to operate.

Extra smart

Our intuitive user interface combines visibility, sound and touch to create a perfectly balanced operating environment with an intelligent colour display at its heart. Advanced diagnostics and smart settings allow for improved operational control and safety.

More efficient



More choice of drive lines

You can choose from either Medium Performance (MP) or High Performance (HP) drive lines. The MP engine and transmission combination can handle most day-to-day applications. However, if you need that extra power and faster lifting speed, then the HP combination might be more suitable. Both options come with Eco Drive modes with three different operating modes.

Two performance alternatives



	Engine Power	Engine Torque	Transmission	Lift & Lowering Speeds
Medium	160-170 kW (max 2100 rpm)	900-1000 Nm	 3+3 gears (no lock up)	↑ 0.55 - 0.50 m/sec ↓ 0.50 - 0.60 m/sec
High	180-190 kW (max 1800 rpm)	1100-1200 Nm	 4+4 gears (with lock up)	↑ 0.65 - 0.60 m/sec ↓ 0.55 - 0.60 m/sec

More performance on demand

Our entire range of empty container handlers comes with ECO Drive modes, giving you three different power modes to choose from.

Power Mode:

when speed is of the essence. With full engine speed you will be able to move quickly about the yard, lift and lower, without compromising on safety.

Normal Mode:

when you need to retain some speed. With a slightly reduced engine speed you can expect 5-15% lower running and fuel costs.

Economy Mode:

when you need the lowest running costs. With engine speed reduced even further you can expect 10-25% lower running and fuel costs.

Save up to **5-15%** in running costs

Save up to **10-25%** in running costs

More value

Being the most reliable and robust range of empty container handlers in the market can give you real advantages, like higher uptime and lower total running costs.

Safer to operate

With a clearer view forward, backward and upward, a new ergonomically designed cabin, non-slip access surfaces with supporting handrails, plus numerous safety options to choose from including our Reverse Warning System, Alcolock and four overload alerts you can be sure that your operator is working in a safe environment.

Lowering operating costs

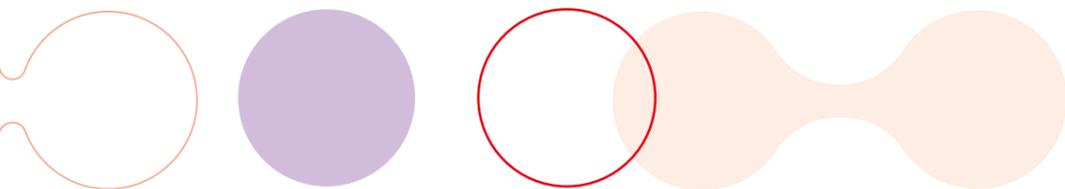
You get longer servicing intervals than before so you can keep your machine hard at work for longer. Plus, with the addition of advanced diagnostic tools and monitoring systems, faults can be dealt with quickly, thereby reducing any downtime.

Higher resale values

With over 10,000 machines built to the high standard you expect from us - Kalmar Empty Container Handlers are known for their reliability and durability which is why they demand the highest resale values in the market.

Best lifetime value

Higher uptime, improved productivity and lower costs per move coupled with high re-sale values means you can expect one thing; the best lifetime value you can expect of any empty container handler.



More options



A large range of options to make your operations even safer and more eco-efficient.

Kalmar has a range of options that make operating your equipment even safer



Fire Suppression System. To protect your operator and machine from fire you can fit a Fire Suppression System* to your machine. The system utilises multiple spray nozzles that release a high pressure water mist where the fire has been detected from a re-chargeable water tank. This can be activated manually or automatically through an in-cabin temperature sensor.



Alcolock. To ensure that your driver is at their best when operating your equipment you can install an Alcolock system. This system makes sure that the driver meets alcohol blood level standards before being able to start the machine, much like a breathalyser.



Reverse Beeper System. When your staff are working side by side with moving vehicles there is always a safety risk. Installing a reverse beeper system provides a clear acoustic alert when the machine is reversing so personnel can make sure that they are out of harm's way at all times.



Reverse Warning System. Knowing what's going on behind you is critical when other personnel are present. Four rear sensors and a reversing camera relay real-time information to an in-cabin display, alerting the driver to any dangers, increasing personnel and driver safety. You can also add additional cameras on the spreaders or on the front of the machine.



Additional lighting. Extra lighting, particularly if you operate your machine at night, as you can bring greater operational visibility and safety for personnel working on the site. You can choose additional LED working lamps on specific positions.



Kalmar Safety Cameras. There are a range of camera solutions available that will enhance the overall safety of your reachstacker when in operation. Cameras extend and enhance the drivers visibility range, record your reachstacker's movements and provide alerts if your reachstacker is at risk of hitting something by using radar. You can choose one solution or combine a number together.



Safety cage. An additional safety cage can be fitted around the cabin to provide additional safety for your driver from falling cargo.



Cabin options. Depending on your specific needs you can choose from a low or high mounted cabin (+600mm). High cabins provide better visibility for the driver particularly when working with two containers or on high stacks.



Container Checking System. The Kalmar Container Checking System makes it easy, fast and safe to identify and report containers that are not safe to handle. By automatically locking the mast and spreader to ensure a secure inspection position which makes the machine inoperable while in inspection mode, it will keep your team safe. The system ensures that damaged containers will be removed from service and not be filled with goods and shipped on, potentially causing issues at the next handling facility. If an insurance claim needs to be raised then this system can also help provide the documented evidence you need to support your claim.

Kalmar has a range of solutions that will help make your equipment more eco-efficient and sustainable



Tyre Pressure Monitoring System. Helps to reduce wear and tear on tyres which results in reduced fuel consumption. Bluetooth sensors keep the driver advised of the condition of the tyres continually. Active care of your tyres can result in a 10-40% increase in tyre life.



Start/Stop function. An optional start/stop function can 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.

* Cannot suppress a battery fire.

More safety fitted as standard

All Kalmar equipment is compliant with EN 1175:2020.

At Kalmar, the safety of people working with our machines is always at the top of our minds, which is why meeting global safety standards is important to us. The safety standard EN 1175:2020, which sets the electrical and electronic component standards for industrial trucks, has been updated to improve the safety of these machines while in operation. This update is valid from April 2023. All Kalmar counter balanced machines, including reachstackers, empty container handlers and forklifts have been updated to meet this new standard to ensure that working with a Kalmar machine is as safe as it can be.

For Kalmar, the safety of your drivers and maintenance staff is of critical importance, which is why our machines come with many more safety features fitted as standard than other machines available in the market.

The features listed here come fitted as standard on all Kalmar machines. You can enhance your employees' safety further by fitting your machine with our additional safety options listed on the following pages.



2-point seat belt. Ensures that your driver is safe and secure while operating our equipment, all Kalmar machines are equipped with an adjustable 2-point seat belt system.



3-point Contact System. Makes sure your drivers are safe when entering or exiting our equipment. All machines are fitted with steps and handles to ensure they can always maintain three points of contact with the vehicle, helping to keep them safe and preventing incidental injuries.



Double brake pedals/ Dual brake pedals. To avoid driver leg fatigue, every machine is equipped with dual brake pedals which require only heel to toe movements, allowing the driver to move his foot between the accelerator and brake pedals without having to move their leg.



Steps with anti-slip protection. To reduce the risk of your driver slipping or falling on our equipment, all entering and exiting points are fitted with non-slip surfaces giving them extra grip, so your drivers stay safe.



Control System. All our equipment is fitted with an electronic Control System for monitoring the machine's different functions while in operation, helping to keep your driver fully informed at all times with up-to-date Operating, Event Controlled and Error Code information.



Operating information. Our equipment's Control System provides several operating information menus, which give your operator and maintenance personnel a great insight into the on-going performance of the machine, allowing them to keep it running optimally.



Event controlled information. Provided through the Overload Protection System to warn the driver through the equipment's Control System if their load exceeds the specified safety limits.



Error code information. Should there be any issue with your equipment while in operation, the electronic control system will immediately alert your driver with the appropriate error code, so they know exactly what is going on and can take appropriate action.



Display. Cabins are fitted with a large easy to read display which keeps your drivers fully aware of the machine's on-going performance and any maintenance actions that need to be taken.



Control Breaker System for load handling. All of our equipment is fitted with a Control Breaker System, which automatically shuts down the load handling system should a fault occur, until the fault has been corrected. Keeping your driver, equipment and load safe.



Operator Presence Detection System. Maintains the highest levels of safety for both the driver and pedestrians, as all our equipment is fitted with an alarm or visual indicator that comes on automatically if:

- The driver does not fasten their seat belt while in operation.
- The driver leaves their seat without engaging the parking brake.

In addition, if the driver leaves their seat while the machine is operational, the transmission is automatically shifted to neutral and load-handling functions are disabled.



Engine/transmission Protection and Warning Systems. Warning systems, designed to protect your machine's driveline in case of higher than expected temperatures or a pressure build up, are standard on all equipment, avoiding unnecessary mechanical failures.



External reverse light. For the safety of others, all our equipment is equipped with external reversing lights that help the driver keep everyone informed that they are moving backwards.



LED lights. These come fitted as standard on all our equipment, providing better visibility when working in reduced light than halogen lights.



Neutral start switch. A neutral start switch means your driver can't start his machine while it is in gear, preventing any damage to the driveline and any uncontrolled equipment movements.



Protection against falling objects. Cabin roof windows on all our equipment are fitted with high strength materials which can withstand heavy blows, helping to protect your drivers from falling objects.



Good visibility. Kalmar cabins provide your drivers with excellent visibility, forwards, upwards, sideways and behind them to help them stay safe while in operation.



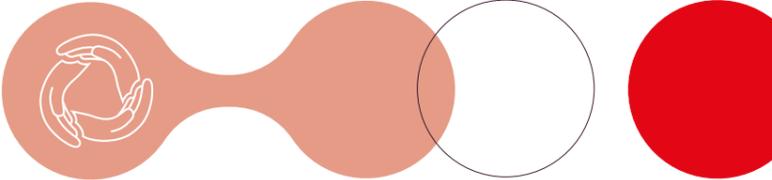
Keep moving with Kalmar Services

To keep your business moving Kalmar Services offers a range of services that can help you keep your equipment moving optimally.

Kalmar Care

Care that keeps your business moving.
 With Kalmar Care you get a flexible service that's built around your business. Including, the experience and knowledge of Kalmar's dedicated staff, coupled with transparency and increased predictability of costs.

Kalmar Care is available in three different service models: our two customisable contracts – Essential Care and Complete Care – and our flexible solution On Demand Care.



Service models:



Essential Care
 A maintenance solution to keep your equipment in an optimal condition.



Complete Care
 A complete service solution providing piece of mind and maximum equipment uptime.

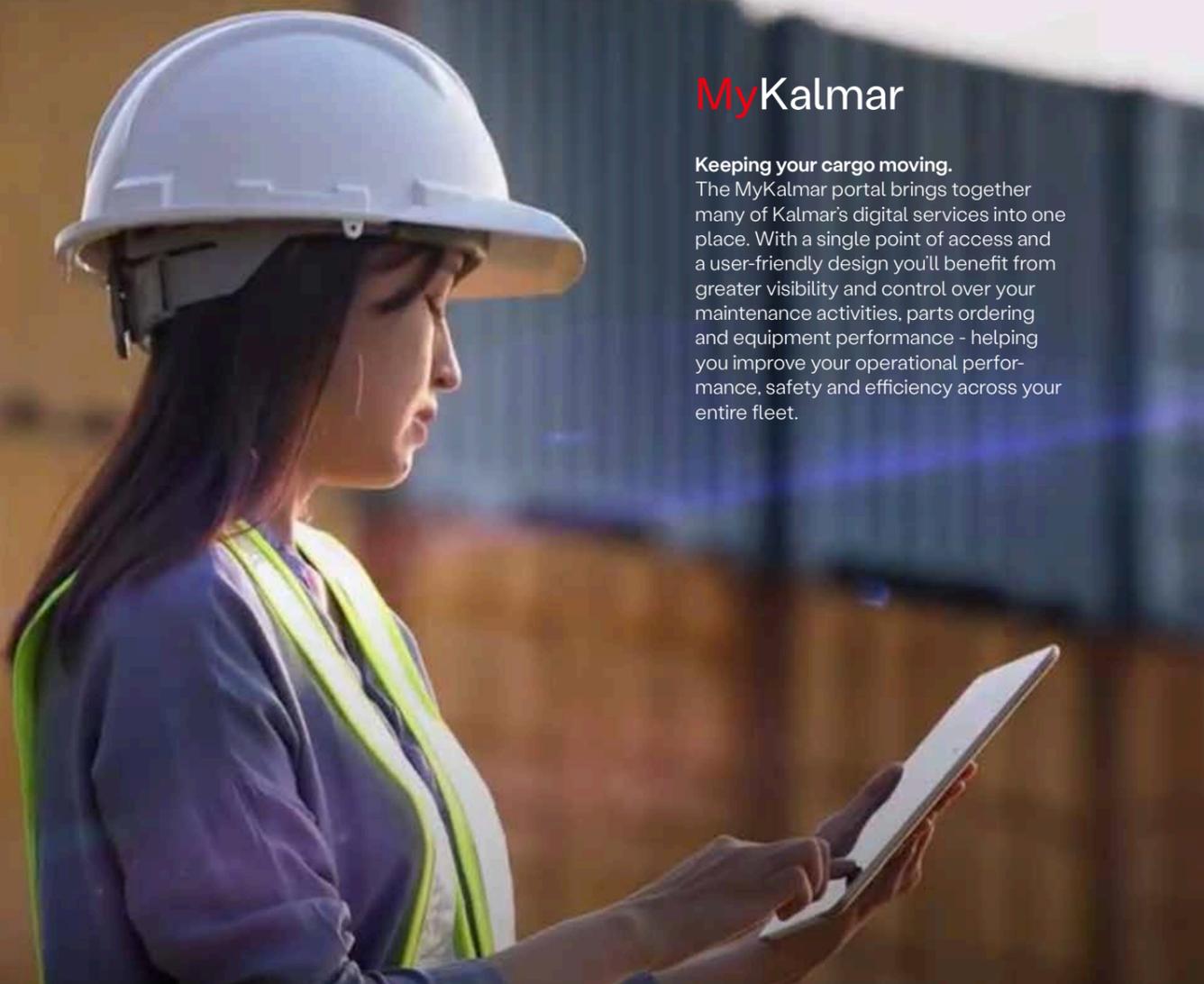


On Demand Care
 Top-of-the-line service whenever you need it.

Maintenance Planning	●	●
Preventive Maintenance	●	●
Predictive Maintenance		●
Corrective Maintenance		●
Preventive Spare Parts	●	●
Corrective Spare Parts		●
Lubricants	●	●
MyKalmar	●	●
Kalmar Insight	●	●
Tyre Maintenance		●
Battery Maintenance		●

● Included ● Optional

Top-of-the-line service whenever you need it



MyKalmar

Keeping your cargo moving.

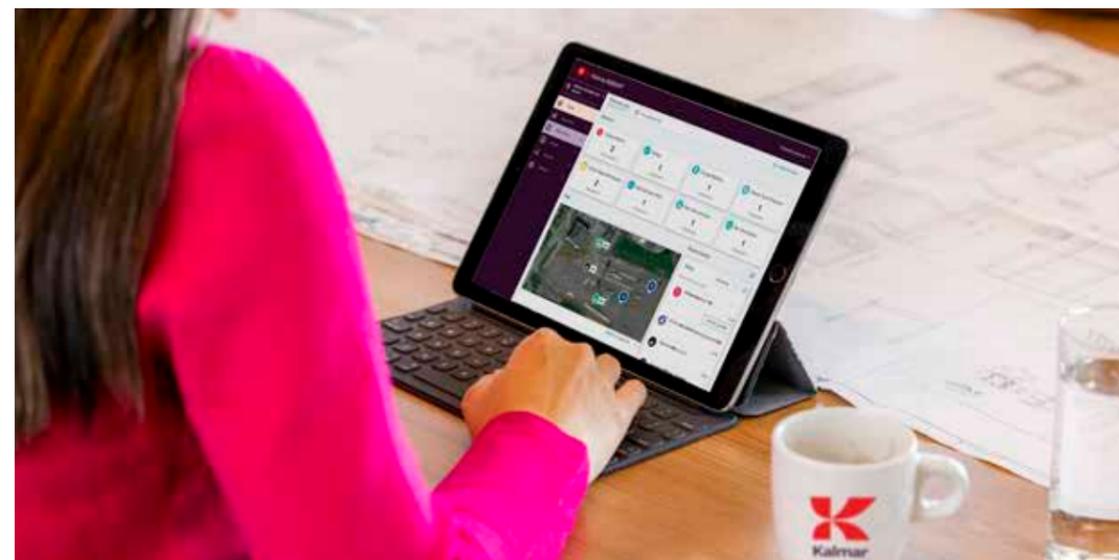
The MyKalmar portal brings together many of Kalmar's digital services into one place. With a single point of access and a user-friendly design you'll benefit from greater visibility and control over your maintenance activities, parts ordering and equipment performance - helping you improve your operational performance, safety and efficiency across your entire fleet.

Kalmar Insight

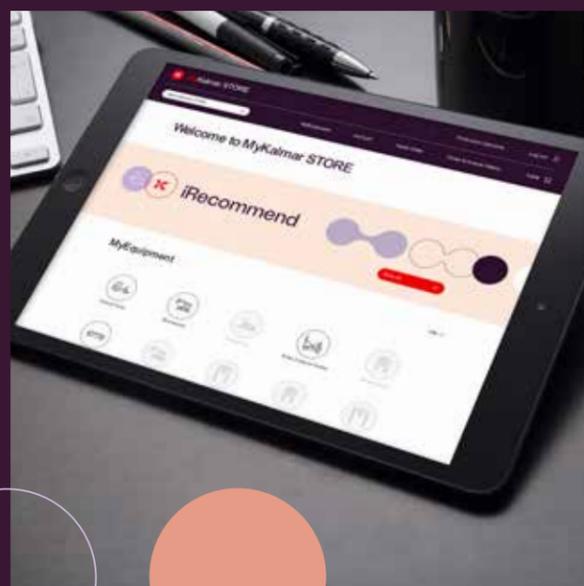
Optimise your operations with Insight.

Kalmar Insight* is a performance management tool for cargo handling, which gives you an easy to use overview of your fleet operations, by aggregating data from multiple sources, including equipment built by other manufacturers. Review your entire fleet activities, schedule maintenance activities and order the required parts

automatically. All enabling you to take action on real-time information, that will help improve your overall operations immediately. Kalmar Insight comes fitted and ready to be activated in all new Kalmar equipment, it can also be retrofitted into existing Kalmar equipment or those built by other manufacturers.



*Installation costs and/or an annual subscription fee may apply.



MyKalmar STORE

MyKalmar STORE is your one stop shop for all the parts you need which is accessible through MyKalmar. Open 24/7, accessible on any screen and available in different languages, MyKalmar STORE stocks 100s of thousands of Kalmar Genuine Parts at any given time and we can have them delivered quickly to you, no matter where you are in the world. You can search, order and then track your order all through the same application. MyKalmar STORE has been designed to make your life easier.

Kalmar Training

Enhance your skills.

To get the most out of your new machine our training centre offers a range of courses for both your technicians and operators. Operators can be taught how to drive the machine for optimum performance and minimum waste, and to learn what needs to be checked daily for optimal safety. Technicians can be educated with the knowledge they need to keep your new equipment in top condition in a safe way. Courses are a mix of theory and hands-on experience.



Standard

Kalmar DCG80-110

Kalmar DCG80-110, E4-E8 // Empty Container Handlers // 8 - 11 tonnes (EU3 / Tier 3, EU4 / Tier 4 or EU5)

Norms, standards and regulations according to:

- Machinery Directive 2006/42/EC
- Safety Industrial Trucks ISO 3691-1 & EN 16307-1
- Safety Low & High Lift Trucks ANSI/ITSDF B56.1
- Stability of EC-Handlers ISO 22915-9
- CE-marking for trucks within EU/EEA
- ANSI/ITSDF-marking for North America trucks

Chassis

- Strong, durable heavy-duty EC-Handler chassis
- High and rear mounted heavy-duty tilt cylinders
- LHS access stairway, with steps and a wide platform
- Low cabin mounting (LCM) at the rear of the truck
- Very good rear end visibility of the truck
- Chassis with full access to the drive line
- Easy-to-open drive line cover plates (low noise)
- Lifting eyes and anchor points (front & rear)
- Towing pin (rear - incasted)

Body

- Steps with anti-slip protection
- 2x Rear view mirrors - rear on front mudguards
- Strong and protective mudguards (front & rear)
- Noise insulation kit for the complete truck

Steer Axle (rear)

- Kalmar steer axle mounted dual pivot bearings
- Wide track axle with mechanical stops (+3 deg)
- El-servo power steering with double acting cylinder
- Steer axle with narrow turning radius

Drive Axle (front)

- Kessler planetary axle with differential drive
- Wide track axle for high side stability
- Oil-cooled Wet Disc Brakes (WDB)
- High pressure filter (10 my) for the brakes
- DCG80ES44-87: D81-ND, width 4,0 m.
- DCG90ES44-87: D81-ND, width 4,1 m.
- DCG100ES44-87: D91-ND, width 4,1 m.
- DCG110ES44-87: D91-ND, width 4,1 m.
- DCG100ED44-65: D91-ND, width 4,1 m.
- DCG110ED44-65: D91-ND, width 4,1 m.
- DCG100ED76-87: D91-HD, width 4,6 m.
- DCG110ED76-87: D91-HD, width 4,6 m.

Wheels (Tyres & Rims)

- DCG80: Tyres 12.00x24" (4+2)
- DCG90-110: Tyres 14.00x24" (4+2)

Drivetrain

- Volvo and Cummins diesel engines 6 cylinder
- Emission approval EU3 / Tier 3, EU4 / Tier 4 or EU5
- High power & torque with low fuel consumption
- Engine with preheater, monitoring and protection system
- Fully automatic transmission DANA TE-14000
- Transmission monitoring and reverse protection
- Declutch function activated by the brake pressure
- Strong radiators for engine, transmission & brakes
- Muffler and exhaust pipe in stainless steel

Load-Sensing Hydraulics

- Load-sensing variable piston pumps (2x)
- Power-on-demand with high lift & lowering speeds
- Pumps for mast, spreader, brakes & steering
- Vane pumps for brake pressure & oil cooling (2x)
- Return filters for the work hydraulics (2x/10 my)
- Servo filter for the work hydraulics (10 my)
- Pressure filter for hydraulics / brakes (10 my)
- Power steering, power brakes & ORFS-couplings
- Diesel tank 380 litre incl. breather filter

Lift Mast

- Mast design for up to 8-high single & double stacking
- Duplex 2-stage mast with high mounted tilt cylinder
- Strong, durable lift mast, 1 pair of cylinders & chains
- Heavy-duty mast profiles and strong cross members
- Mast with strong mast wheels, bearings & guide pads
- Large diameter shafts / bearing for mast / tilt fixations
- Only 2 oil hoses + 1 electrical cable over the mast
- Mast tilt angles +3 / -3 deg (FW / BW)
- Mechanical tilt indicator on tilt cylinder
- Transport position striping (on lift mast)

Lift Carriage

- Carriage with strong wheels, bearings & guide pads
- Large sideshift of ±600 mm (total stroke 1200 mm)
- 2 fixed twistlocks with indication lamps
- Mechanical Pile Slope by gravity (MPS) 250 mm
- The carriage is connected by the 2 lift chains

Attachment (DCG80-110 Single Stacker)

- Side lift with hydraulic extension 20'-40'
- 2 fixed twistlocks with indication lamps
- Large sideshift of ±600 mm (total stroke 1200 mm)
- Spring loaded floating vertical heads (0-250 mm)
- Safety locking, alignment pins & sensors (2x)
- Lowering interrupt sensors for safe handling

Attachment (DCG80-110 Double Stacker)

- Side lift with hydraulic extension 20'-40'
- 2 mechanical lift hooks with 2 hydraulic side clamps
- The 2 lift hooks connects the bottom container (l)
- The 2 side clamps connect upper & bottom containers
- 20'-40' containers are locked by the side clamps
- Indication lamps for alignment / locked container (l+ll)
- Large sideshift of ±600 mm (total stroke 1200 mm)
- Spring loaded floating vertical heads (0-250 mm)
- Safety locking, alignment pins & sensors (4x)
- Lowering interrupt sensors for safe handling

Electronic System

- OLS1, Over Loading System, monitoring lift with speed limit (pop-up)
- Electronic weight scale in main display
- Speed limit outside drive position (ED)
- Dynamic speed limits on 2 load levels (ED)

Electrical System 24V

- Battery box 2x12V & main power switch
- Electric service box on chassis (LHS)
- 2 working LED-lights on spreader carriage (lift head)
- 2 working LED-lights on spreader on end beams
- 2 working LED-lights on mast
- 2 working LED-lights front on fenders (head beam)
- 2 working LED-lights rear below cabin (in reverse)
- 2 position LED-lights on each side of the truck
- 2 tail / brake LED-lights rear in counter weight
- 4 blinker LED-lights (front - rear / left - right)
- 2 flashing LED-brake lights (when reversing)
- 1 rotating warning LED-beacon
- Buzzer when reversing (reverse alarm)

Cabin (EGO)

Structure

- Spacious, modern cabin with good ergonomy level
- Large windows, good visibility, in all directions
- Instep handle (left side)
- Sliding window on both sides
- Doors with air damper and key lock (L + R)
- Tinted laminated windows

Comfort

- Seat Kalmar, mech. spring, high back
- Adjustable armrest (RHS) & 2-point safety belt
- Inside rear view mirror (right side)
- Interior lights with fade away function
- Fully adjustable steering wheel incl tilt function
- Fully adjustable colour display
- Electric adjustable operational console with joystick, operational buttons & armrest (RHS)
- Power steering wheel with steer knob
- Electric horn
- LED background light for buttons & switches

Controls

- Electronic lift levers for mast & spreader functions
- Button for forward-neutral-reverse on 1st lift lever
- Auto rev-up accelerator at lifting / tilting / spreader
- Electric accelerator pedal
- Double brake pedals (L + R)
- Gear lever with electronic hand brake (on/off)
- Automatic gear shifting (P1)
- Multi-function lever LHS (parking brake and gear/ direction switch)
- Combined horn and blinker lever
- Warning - hand brake (on/off) leaving seat
- Hour meter

Climate

- ECH, electronic controlled heating/ventilation
- Fresh air and recirculation filter
- Wipers/washers on front, rear and roof windows
- Interval wiper functions on front, rear and roof
- Tinted windows

Information systems

- CECS 2.0 Kalmar intelligent control system
- HMI based on TFT-display 4,3" (109 mm)
- Colour display DM430E (automatic fault analysis)
- Menu control with toggle wheel & push buttons

ECO Drive Modes (EDM):

- Power mode
- Normal mode (default setting)
- Economy mode
- Operator menu:**
- System voltage
- Actual gear
- Engine rpm
- Travelling speed (km/h or m/h)
- Combined hydraulic and brake oil temperature
- Transmission oil temperature
- Engine oil pressure (Volvo)
- Engine oil pressure only (Cummins)
- Engine coolant temperature
- Clock and date
- Operating time (hours)
- Service time indicator (hours)
- Electronic weight scale functions
- Status of heating system & AC system
- Fuel level (diesel and optional AdBlue)
- Est. operating time before empty tank (hour/min)
- Service indicator
- Container counter with reset function
- Trip computer / statistics

Head-Up display for twistlock indication:

- LED indicators for alignment & container(s)

Various warning lights & signals:

- Charging battery
- Low brake pressure
- Failure indicator
- High engine coolant temperature
- Low engine coolant level (not on Cummins)
- Low engine oil pressure
- Preheating engine
- Transmission oil temperature
- Low fuel level (incl AdBlue)
- Hydraulic and brake oil temperature
- Low washer fluid level

Indicator lights:

- Head beam
- Direction indication
- Parking brake

Fleet Management

- Equipped with telemetric hardware for Kalmar Insight

Colour

- Cabin: Iron-Grey RAL 7011
- Chassis, tanks & mudguards: Red RAL 3000
- Boom, attachment & axles: Black RAL 7021
- Rims: Iron-Grey RAL 7011

Documentation and Decals

- Load chart diagram inside cabin
- Machine data sign on chassis incl. load chart
- Warning, tyre pressure & oil pressure stickers
- Information & levers/joystick stickers
- Fuse diagram
- Instruction manual
- Maintenance manual
- Spare parts catalogue

Optional

Kalmar DCG80-110

Kalmar DCG80-110, E4-E8 // Empty Container Handlers // 8 - 11 tonnes (EU3 / Tier 3, EU4 / Tier 4 or EU5)

Chassis

Chassis - ES Empty Single Stacker

- DCG 80-45 ES (L3=4550 mm)
- DCG 90-45 ES (L3=4550 mm)
- DCG 100-45 ES (L3=4550 mm)
- DCG 110-45 ES (L3=4550 mm)
- Chassis - ED Empty Double Stacker**
- DCG 100-45 ED (L3=4550 mm)
- DCG 110-45 ED (L3=4550 mm)

Lift Mast

- Duplex E4 (4-high 8'6" / 4-high 9'6")
- Duplex E5 (5-high 8'6" / 5-high 9'6")
- Duplex E6 (6-high 8'6" / 5-high 9'6")
- Duplex E7 (7-high 8'6" / 6-high 9'6")
- Duplex E8 (8-high 8'6" / 7-high 9'6")
- Triplex E6 (6 of 8'6" / 5 of 9'6") max 10 T
- Triplex E7 (7 of 8'6" / 6 of 9'6") max 10 T
- Container checker device in carriage

Cabin

Structure

- Low mounted cabin (LCM) with dual access stair-ways & upper platforms
- High mounted cabin (HCM), +600 mm, improved vis-ibility, dual access stairways & upper platforms
- Hydraulic tilting cabin (stroke 10 degrees)
- Globetrotter cabin, +200 mm, ledge mount windows
- Safety cage to protect cabin from falling cargo

Comfort

- Various seat alternatives
- Head rest for the seat
- Armrest with adjustment (LHS)
- Horizontal dampening/suspension of seat
- Extra trainer seat incl 2-p safety belt (LHS)
- Bracket for terminal and monitor (RHS)
- Writing pad, A4 paper box and reading lamp (RHS)
- Extra rear view mirror (inside cabin / left side)

Controls

- Lever steering incl switch for forward/reverse
- Mini-wheel steering incl switch for forward/reverse
- Only second gear activated (P3)
- Safety override for hydraulic functions (by code)

Climate

- Electronic Climate Control (ECC)
- Microfilter in additional to std filter
- AC/ECC switched off when door is open
- Sun visor front window (black net)
- Sun visor roof window (black net)
- Sun visor rear window (black net)
- Sun visor roof window (reflective film)
- Extra cabin heater (incl. 1x 220V outlet)
- Postheating

Drivetrains

Medium Performance (MP)

- DANA TE-14300 (3+3 gears) for all MP drive lines
- Cummins QSB-6.7-C220 (EU3 / Tier 3, 164 kW, 949 Nm, 6,70 l, 6-cyl)
- Volvo TAD-850-VE (EU3 / Tier 3, 160 kW, 1060 Nm, 7,70 l, 6-cyl)

High Performance (HP)

- DANA LTE-14400 (4+4 gears + Lock-Up) for all HP drive lines
- Volvo TAD-851-VE (EU3 / Tier 3, 185 kW, 1160 Nm, 7,70 l, 6-cyl)
- Volvo TAD-871-VE (EU4 / Tier 4F, 185 kW, 1160 Nm, 7,70 l, 6-cyl)
- Volvo TAD-881-VE (EU5, 185 kW, 1160 Nm, 7,70 l, 6-cyl)

- Auto engine & ignition stop, after 5 min idle
- Air intake filter, with Pre-Cleaner, raised air intake
- Start/stop function (for Volvo engine only)
- Stronger/wider drive axle, Kessler D91, 4500 mm

Hydraulics

- Hydraulic mast accumulator (shock dampening)
- Mast tilt angles +3 / -6 deg (FW / BW)
- Mast tilt angles +2 / -3 deg (FW / BW)
- Hydraulic longlife fine filter with by-pass (3 my)
- Block valve mounted on lift cylinders

Body

- Anti slip protection on fenders and tanks
- Mud flaps in steel + rubber (front)
- Mud flaps in rubber (rear)
- Noise insulation kit for complete truck (1-3 dB)

Electronic System and Settings

- OLS3, Over Loading System, cut lift with speed limit (pop-up)
- Lift height limitation
- Lift height warning over defined height (specify height)
- Speed limitation (specify speed)
- Speed limit over defined lift height (specify height)
- Speed limit outside drive position (ES)
- Dynamic speed limit depending of lift height
- Dynamic speed limit on 2 load levels (ES)

Electrical System 24V

- 2 extra working LED-lights on mudguard
- 4 extra working LED-lights on mudguard
- 2 extra working LED-lights on cabin roof
- 4 extra working LED-lights on cabin roof
- 6 extra working LED-lights on cabin roof
- 8 extra working LED-lights on cabin roof
- 2 extra working LED-lights on mast
- 2 extra working LED-lights on carriage
- 2 extra reverse LED-lights on counter weight
- 1 extra warning LED-beacon the top of the mast
- 1 extra entrance LED-lights on left stairway + button
- 2 el. heated mirrors on front mudguards (std pos.)
- 2 el. heated & adjustable mirrors on front mudguards
- Radio with MP3, Bluetooth, speakers (24V)
- DAB-Radio with CD, MP3, Bluetooth, speakers (24V)
- 2 x 24V sockets and 2 x 12V sockets in cabin
- 2 x 24V sockets and 2 x 5V / USB sockets in cabin
- Electric air pressure horn

Lift Carriage

- Automatic extension 20'-30'-40' stop
- Soft landing by inductive sensor (on twistlocks only)
- Hydraulic Pile Slope by cylinders (HPS ±5 deg), the MPS with 0-250 mm end beam levelling is included
- All trucks has full lifting capacity with MPS & HPS
- Available for both single and double stackers

Attachment (Single Stacker)

- Twistlock spreader for wide body (TWL-WTP)
- Spreader standard / wide body container
- Standard / wide body containers are 8' / 8,5' wide
- 2 lift heads with Wide Twistlock Position (WTP)
- Hydraulic moveable twistlocks (stroke 76 mm/3")

Attachment (Double Stacker)

Hook, clamp & safety wedge double spreader

- Lift heads with lift hook and hydraulic side clamp
- Hydraulic safety wedge for bottom container lock
- Active safety locking of 45'-53' single containers
- 45'-53' containers are locked by safety wedge (SW)

C-hook spreader with optimised visibility

- Dedicated Hydraulic Pile Slope (HPS) is included, no mechanical end-beam leveling is included
- Side lift with hydraulic extension 20'-40'
- 20'-40' containers are locked by the side clamps
- Indication lamps for alignment / locked container (l+ll)
- Large sideshift of ±600 mm (total stroke 1200 mm)
- Safety locking, alignment pins & sensors (4x)
- Lowering interrupt sensors for safe handling

Steer Axle (rear)

- Wheel nut protection on steer tires
- Steer cylinder spacer

Wheels

- Spare wheel & rim 12.00×24" of various brands
- Spare wheel & rim 14.00×24" of various brands

Additional equipment

- Reverse display inside cabin (77/17 cm)
- Reverse camera connected to display in cabin
- Spreader cameras (2x) connected to display in cabin
- Reverse warning system (camera, display & sensors)
- Tyre pressure monitoring system (Bluetooth)
- Diesel powered cabin heater 5 kW
- Alcolock Draeger in cabin
- Semi-automatic fire suppression system (DAFO)
- Fire extinguisher 5-6 kg, powder
- Lockable fuel cap
- Cabin heater incl 220V outlet
- Engine heater incl cab heater
- Engine/hydraulic oil heater incl cab heater
- Central greasing base machine
- Central greasing spreader
- Chain greaser with replaceable cartridge
- Kalmar Insight solutions
- Tool kit or filter kit 2000 hrs
- Soft landing function with ultrasonic sensor (only for single stacking spreader)

Fleet Management

- Kalmar Insight licence (only in certified countries)
- Kalmar Insight Driver Monitor (RFID reader + 10 unique driver tags)
- Kalmar Insight extra monitoring tags

Colour (specify RAL number)

- Other colour than standard - on chassis
- Other colour than standard - on cabin
- Other colour than standard - on rims
- Reinforced anti-corrosion protection (extra primer)

Training

- Contact Kalmar Training Centre for training programs



Specifications

			DCG80-45ES					DCG90-45ES					DCG100-45ES				
			ES4/4	ES5/5	ES6/5	ES7/6	ES8/7	ES4/4	ES5/5	ES6/5	ES7/6	ES8/7	ES4/4	ES5/5	ES6/5	ES7/6	ES8/7
MANDATES	Stacking model and height																
	Type of handling		Single Stackers					Single Stackers					Single Stackers				
	Lifting capacity, with MPS or with HPS ¹	Q1 (kgs)	8000	8000	8000	8000	8000	9000	9000	9000	9000	9000	10000	10000	10000	10000	10000
	Stacking height, no. of containers (8'6" / 9'6")		4/4	5/5	6/5	7/6	8/7	4/4	5/5	6/5	7/6	8/7	4/4	5/5	6/5	7/6	8/7
	Spreader locking type, standard / optional		Standard: Twistlocks / optional: Twistlocks + WTP (76 mm)					Standard: Twistlocks / optional: Twistlocks + WTP (76 mm)					Standard: Twistlocks / optional: Twistlocks + WTP (76 mm)				
	Spreader type, extension stops, sensors		Sidelift, 20' + 40' stops, alignment & interrupt sensors					Sidelift, 20' + 40' stops, alignment & interrupt sensors					Sidelift, 20' + 40' stops, alignment & interrupt sensors				
WEIGHTS	Wheelbase	L3 (mm)	4550					4550					4550				
	Load centre, front of tyres, with MPS or HPS ²	L2 (mm)	1210 to 1280					1210 to 1280					1210 to 1280				
	Lost load centre, to front face of tyres	X (mm)	700					700					700				
	Service weight, with MPS or HPS ²	(kgs)	33300/34400	34700/35800	35300/36400	36800/37900	38300/39400	35300/36400	36700/37800	37300/38400	38800/39900	40300/41400	38000/39100	39400/40500	40000/41100	41500/42600	43000/44100
	Axle load, front unloaded - rated load MPS	(kgs)	20900/33100	22400/34700	23100/35300	24700/37000	26400/38600	21400/35200	22900/36700	23600/37400	25200/39000	26900/40700	22300/37700	23800/39200	24500/39900	26200/41500	27800/43200
	Axle load, front unloaded - rated load HPS ²	(kgs)	22200/34400	23700/36000	24400/36700	26100/38400	27700/40000	22700/36600	24200/38100	24900/38800	26500/40300	28200/42000	23600/39100	25100/40600	25800/41200	27500/42900	29100/44500
WHEELS	Axle load, rear unloaded - rated load MPS	(kgs)	12400/8200	12300/8000	12200/7900	12100/7800	11900/7600	13900/9100	13800/9000	13700/8600	13600/8800	13400/8600	15700/10400	15600/10200	15500/10200	15400/10000	15200/9900
	Axle load, rear unloaded - rated load HPS ²	(kgs)	12200/7900	12100/7700	12000/7600	11800/7500	11700/7300	13700/8800	13600/8700	13500/8600	13400/8600	13200/8400	15500/10100	15400/9900	15300/9900	15100/9700	15000/9600
	Tyres, type, design, thread depth		Pneumatic / Diagonal / E4					Pneumatic / Diagonal / E4					Pneumatic / Diagonal / E4				
	Tyres, dimension (front + rear)	(in)	Standard: 12.00x24" / Optional: 14.00x24"					14.00x24"					14.00x24"				
	Rims, dimension (front + rear)	(in)	Standard: 8.50x24" / Optional: 10.00x24"					10.00x24"					10.00x24"				
	No. of wheels, front - rear (driven), pressure	(MPa)	4 - 2	4 - 2	4 - 2	1.0	4 - 2	4 - 2	4 - 2	1.0	4 - 2	4 - 2	4 - 2	1.0	4 - 2	4 - 2	4 - 2
DIMENSIONS	Track width (front - rear)	S1 - S2 (mm)	Standard: 3270 - 2450 / Optional: 3270 - 2400					Standard: 3270 - 2450 / Optional: 3270 - 2400					Standard: 3270 - 2450 / Optional: 3270 - 2400				
	Truck width drive axle, standard / optional	B / B (mm)	Standard: 4050 (12.00x24") / Optional 4100 (14.00x24")					Standard: 4100 / Optional: 4600					Standard: 4100 / Optional: 4600				
	Drive axle (ND = Normal Duty / HD = Heavy Duty)		D81-ND					Standard: D81-ND / Optional: D91-HD					Standard: D91-HD				
	Lift mast, type, stage, cylinders and chains		Duplex / 2-stage / 2 cylinders / 2 lift chains					Duplex / 2-stage / 2 cylinders / 2 lift chains					Duplex / 2-stage / 2 cylinders / 2 lift chains				
	Mast tilt, forward – backward, standard / optional	alfa-beta (deg)	Standard: 3-3 / optional: 3-6 or 2-3					Standard: 3-3 / OPT: 3-6 or 2-3					Standard: 3-3 / optional: 3-6 or 2-3				
	Lift mast height, min - max	H3 - H5 (mm)	7040 - 12040	8540 - 15040	9040 - 16040	10290 - 18540	11540 - 21040	7100 - 12100	8600 - 15100	9100 - 16100	10350 - 18600	11600 - 21100	7100 - 12100	8600 - 15100	9100 - 16100	10350 - 18600	11600 - 21100
DRIVETRAIN	Lift height, min - max in twistlocks / lift hooks	H10 - H4 (mm)	2240 - 12240	2240 - 15240	2240 - 16240	2240 - 18740	2240 - 21240	2300 - 12300	2300 - 15300	2300 - 16300	2300 - 18800	2300 - 21300	2300 - 12300	2300 - 15300	2300 - 16300	2300 - 18800	2300 - 21300
	Height cabin roof, standard / optional	H6 (mm)	Standard: 3940 / optional: 4540					Standard: 4000 / optional: 4600					Standard: 4000 / optional: 4600				
	Seat index point (height)	H8 (mm)	Standard: 2800 / optional: 3400					Standard: 2860 / optional: 3460					Standard: 2860 / optional: 3460				
	Truck length with spreader, MPS / HPS	L (mm)	6900 / 6950					6900 / 6950					6900 / 6950				
	Spreader width, twistlocks / hooks, (min - max))	Va - Vb (mm)	6085 - 12220					6085 - 12220					6085 - 12220				
	Spreader sideshift, stroke both directions (total)	V1 (mm)	± 600 (1200)					± 600 (1200)					± 600 (1200)				
OTHERS	Spreader levelling, MPS / HPS, standard / optional	(mm/deg)	Standard: 0 - 250 / optional: HPS: ± 5 (incl MPS)					Standard: 0 - 250 / optional: HPS: ± 5 (incl MPS)					Standard: 0 - 250 / optional: HPS: ± 5 (incl MPS)				
	Ground clearance	(mm)	250					300					300				
	Aisle width, with 20' - 40' container	A1 - A2 (mm)	10600 / 14200					10850 / 14350					10850 / 14350				
	Turning radius, inner / outer 20' / outer 40'	R1-R2-R3 (mm)	1150 / 6750 / 9350					1250 / 7000 / 9700					1250 / 7000 / 9700				
	Engine type, design		Diesel / 4-stroke / turbo / intercooler					Diesel / 4-stroke / turbo / intercooler					Diesel / 4-stroke / turbo / intercooler				
	Drivetrain - performance levels		MP Medium Performance		HP High Performance			MP Medium Performance		HP High Performance			MP Medium Performance		HP High Performance		
Engine, power / torque, (min - max)	(kW/Nm)	164 / 949		185 / 1160			164 / 949		185 / 1160			164 / 949		185 / 1160			
Fuel consumption, average diesel / AdBlue ³	(L/h-%)	5 - 15 / 1 - 5		5 - 15 / 1 - 5			5 - 15 / 1 - 5		5 - 15 / 1 - 5			5 - 15 / 1 - 5		5 - 15 / 1 - 5			
Travel speed, fwd / rev (unloaded - at rated load)	(km/h)	24 - 24 / 22 - 22		25 - 25 / 25 - 25			24 - 24 / 22 - 22		25 - 25 / 25 - 25			24 - 24 / 22 - 22		25 - 25 / 25 - 25			
Gradeability, max / 2 km/h (unloaded - at rated load)	(%)	29 - 22 / 24 - 19		37 - 30 / 33 - 27			29 - 22 / 24 - 19		37 - 30 / 33 - 27			29 - 22 / 24 - 19		37 - 30 / 33 - 27			
Lifting speed, unloaded - at 70% of rated load	(m/s)	0.55 - 0.50		0.65 - 0.60			0.55 - 0.50		0.65 - 0.60			0.55 - 0.50		0.65 - 0.60			
Lowering speed, unloaded - at rated load	(m/s)	0.50 - 0.60		0.55 - 0.60			0.50 - 0.60		0.55 - 0.60			0.50 - 0.60		0.55 - 0.60			
Transmission, gears forward / reverse		3 + 3		4 + 4 with Lock-Up			3 + 3		4 + 4 with Lock-Up			3 + 3		4 + 4 with Lock-Up			
Transmission type, function, safety		Automatic powershift / reverse protection					Automatic powershift / reverse protection					Automatic powershift / reverse protection					
Drive axle type, service brakes (drive wheels)		Differential / hub reduction / oil-cooled wet disc brakes					Differential / hub reduction / oil-cooled wet disc brakes					Differential / hub reduction / oil-cooled wet disc brakes					
Drive axle, parking brake, brake release		Single big dry disc / hydraulic release					Single big dry disc / hydraulic release					Single big dry disc / hydraulic release					
Steer axle type, design, function		Heavy-duty / single cylinder / power steering					Heavy-duty / single cylinder / power steering					Heavy-duty / single cylinder / power steering					
OVERLOAD	Hydraulic system, type		Load-sensing (power-on-demand) / working & brake oil tank					Load-sensing (power-on-demand) / working & brake oil tank					Load-sensing (power-on-demand) / working & brake oil tank				
	Tank volumes, diesel - AdBlue ³ - oil	(dm ³)	380 / 15 ³ / 320					380 / 15 ³ / 320					380 / 15 ³ / 320				
	Noise, inside LpAZ / outside LwAZ (EDM's)	(dB(A))	63 - 67 / 103 - 107					63 - 67 / 103 - 107					63 - 67 / 103 - 107				
Overload System with warning OLS1 + OLS3			Standard: OLS1 (lift monitor) / Optional: OLS3 (lift cut-off + tilt monitor)					Standard: OLS1 (lift monitor) / Optional: OLS3 (lift cut-off + tilt monitor)					Standard: OLS1 (lift monitor) / Optional: OLS3 (lift cut-off + tilt monitor)				

Notes:
1) MPS = Full lifting capacity with MPS (8-9-10-11 tons).
HPS = Full lifting capacity with HPS incl MPS (8-9-10-11 tons).
Except DCG110-45ED87, 10 tons at 8/7-high.
2) MPS = Mechanical Pile Slope in end beams - by gravity.
HPS = Hydraulic Pile Slope by 2 cylinders incl. MPS.
3) On EU3 (EPA T3) engines there is no AdBlue/DEF package included.
On EU4 (EPA T4F) engines AdBlue/DEF package is included.
On EU5 (EPA T4F) engines AdBlue/DEF and DPF filter package is included.

Specifications

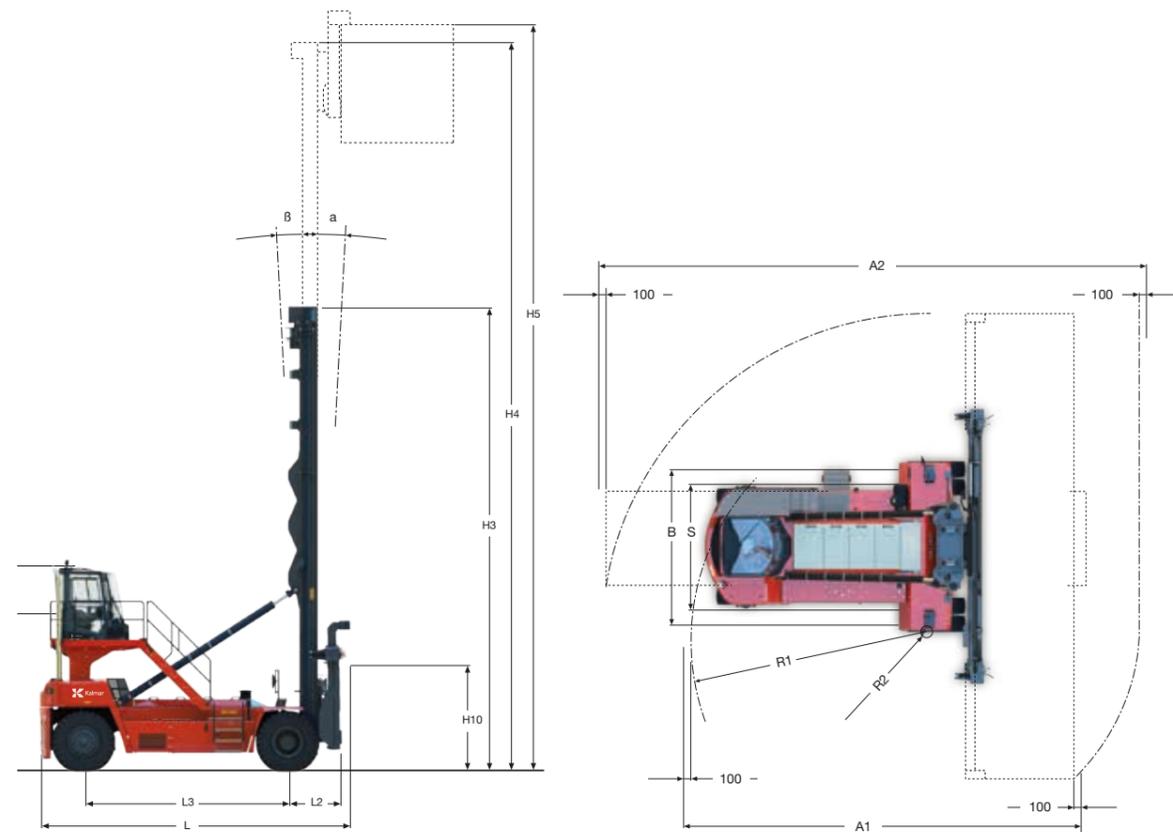
			DCG100-45ED					DCG110-45ES					DCG110-45ED					
			ED4/4	ED5/5	ED6/5	ED7/6	ED8/7	ES4/4	ES5/5	ES6/5	ES7/6	ES8/7	ED4/4	ED5/5	ED6/5	ED7/6	ED8/7	
MANDATES	Stacking model and height			Double Stackers					Single Stackers					Double Stackers				
	Type of handling																	
	Lifting capacity, with MPS or with HPS ¹	Q1	(kgs)	10000	10000	10000	10000	10000	11000	11000	11000	11000	11000	11000	11000	11000	11000	
	Stacking height, no. of containers (8'6" / 9'6")			4+1/4+1	5+1/5+1	6+1/5+1	7+1/6+1	8+1/7+1	4/4	5/5	6/5	7/6	8/7	4+1/4+1	5+1/5+1	6+1/5+1	7+1/6+1	8+1/7+1
	Spreader locking type, standard / optional			Standard: Hooks + Clamps / optional: STD + Safety Wedge					Standard: Twistlocks / optional: Twistlocks + WTP (76 mm)					Standard: Hooks + Clamps / optional: STD + Safety Wedge				
	Spreader type, extension stops, sensors			Sidelift, 20' + 40' stops, alignment & interrupt sensors					Sidelift, 20' + 40' stops, alignment & interrupt sensors					Sidelift, 20' + 40' stops, alignment & interrupt sensors				
	Wheelbase	L3	(mm)	4550					4550					4550				
Load centre, front of tyres, with MPS or HPS ²	L2	(mm)	1210 to 1280					1210 to 1280					1210 to 1280					
Lost load centre, to front face of tyres	X	(mm)	700					700					700					
WEIGHTS	Service weight, with MPS or HPS ²		(kgs)	38400/39500	39800/40900	40400/41500	41900/43000	43400/44500	39700/40800	41200/42200	41700/42800	43200/44300	44700/45600	40100/41200	41500/42600	42100/43200	43600/44700	45100/46200
	Axle load, front unloaded - rated load MPS		(kgs)	22800/38100	24300/39700	25000/40300	26600/42000	28300/43800	22200/39100	23800/40600	24400/41300	26100/42900	27700/44600	22700/39600	24200/41100	24900/41800	26500/43400	28200/45100
	Axle load, front unloaded - rated load HPS ²		(kgs)	24100/39500	25600/41100	26300/41800	27900/43400	29600/45100	23500/40500	25100/42000	25700/42700	27400/44300	29000/46000	24000/41000	25500/42500	26200/43200	27900/44800	29500/46500
	Axle load, rear unloaded - rated load MPS		(kgs)	15600/10300	15500/10100	15400/10100	15300/9900	15100/9700	17500/11600	17400/11500	17300/11400	17100/11300	17000/11100	17400/11500	17300/11400	17200/11300	17100/11200	16900/11100
	Axle load, rear unloaded - rated load HPS ²		(kgs)	15400/10000	15300/9800	15200/9700	15100/9600	14900/9400	17300/11300	17100/11200	17100/11000	17100/11000	16800/11100	17200/11200	17100/11100	17000/11000	16800/10900	16700/10700
	Tyres, type, design, thread depth			Pneumatic / Diagonal / E4					Pneumatic / Diagonal / E4					Pneumatic / Diagonal / E4				
Tyres, dimension (front + rear)		(in)	14,00x24"					14,00x24"					14,00x24"					
Rims, dimension (front + rear)		(in)	10,00x24"					10,00x24"					10,00x24"					
No. of wheels, front - rear (driven), pressure		(MPa)	4 - 2		1.0			4 - 2		1.0			4 - 2		1.0			
Track width (front - rear)	S1 - S2	(mm)	Standard: 3270 - 2400 / Optional: 3780 - 2400			Standard: 3780 - 2400			Standard: 3270 - 2400 / Optional: 3780 - 2400			Standard: 3270 - 2400 / Optional: 3780 - 2400			Standard: 3780 - 2400			
Truck width drive axle, standard / optional	B / B	(mm)	Standard: 4100 / Optional: 4600			Standard: 4600			Standard: 4100 / Optional: 4600			Standard: 4100 / Optional: 4600			Standard: 4600			
Drive axle (ND = Normal Duty / HD = Heavy Duty)			D91-HD			D91-HD			Standard: D91-HD			D91-HD			D91-HD			
DIMENSIONS	Lift mast, type, stage, cylinders and chains			Duplex / 2-stage / 2 cylinders / 2 lift chains					Duplex / 2-stage / 2 cylinders / 2 lift chains					Duplex / 2-stage / 2 cylinders / 2 lift chains				
	Mast tilt, forward – backward, standard / optional	alfa-beta	(deg)	Standard: 3-3 / optional: 3-6 or 2-3					Standard: 3-3 / optional: 3-6 or 2-3					Standard: 3-3 / optional: 3-6 or 2-3				
	Lift mast height, min - max	H3 - H5	(mm)	7040 - 12040	8600 - 15100	9100 - 16100	10350 - 18600	11600 - 21100	7100 - 12100	8600 - 15100	9100 - 16100	10350 - 18600	11600 - 21100	7040 - 12040	8600 - 15100	9100 - 16100	10350 - 18600	11600 - 21100
	Lift height, min - max in twistlocks / lift hooks	H10 - H4	(mm)	2240 - 12240	2300 - 15300	2300 - 16300	2300 - 18800	2300 - 21300	2300 - 12300	2300 - 15300	2300 - 16300	2300 - 18800	2300 - 21300	2240 - 12240	2300 - 15300	2300 - 16300	2300 - 18800	2300 - 21300
	Height cabin roof, standard / optional	H6	(mm)	Standard: 4000 / optional: 4600					Standard: 4000 / optional: 4600					Standard: 4000 / optional: 4600				
	Seat index point (height)	H8	(mm)	Standard: 2860 / optional: 3460					Standard: 2860 / optional: 3460					Standard: 2860 / optional: 3460				
	Truck length with spreader, MPS / HPS	L	(mm)	6900 / 6950					6900 / 6950					6900 / 6950				
	Spreader width, twistlocks / hooks, min - max	Va - Vb	(mm)	6615 - 12750					6085 - 12220					6615 - 12750				
	Spreader sideshift, stroke both directions (total)	V1	(mm)	± 600 (1200)					± 600 (1200)					± 600 (1200)				
	Spreader levelling, MPS / HPS, standard / optional		(mm/deg)	Standard: 0 - 250 / optional: HPS: ± 5 (incl MPS)					Standard: 0 - 250 / optional: HPS: ± 5 (incl MPS)					Standard: 0 - 250 / optional: HPS: ± 5 (incl MPS)				
	Ground clearance		(mm)	300					300					300				
Aisle width, with 20' - 40' container	A1 - A2	(mm)	10850 / 14350					10850 / 14350					10850 / 14350					
Turning radius, inner / outer 20' / outer 40'	R1-R2-R3	(mm)	1250 / 7000 / 9700					1250 / 7000 / 9700					1250 / 7000 / 9700					
DRIVETRAIN	Engine type, design			Diesel / 4-stroke / turbo / intercooler					Diesel / 4-stroke / turbo / intercooler					Diesel / 4-stroke / turbo / intercooler				
	Drivetrain - performance levels			MP Medium Performance		HP High Performance			HP High Performance			HP High Performance						
	Engine, power - torque, min / max		(kW/Nm)	164 / 949		185 / 1160			185 / 1160			185 / 1160						
	Fuel consumption, average diesel / AdBlue ³		(L/h-%)	5 - 15 / 1 - 5		5 - 15 / 1 - 5			5 - 15 / 1 - 5			5 - 15 / 1 - 5						
	Travel speed, fwd / rev (unloaded - at rated load)		(km/h)	24 - 24 / 22 - 22		25 - 25 / 25 - 25			25 - 25 / 25 - 25			25 - 25 / 25 - 25						
	Gradeability, max / 2 km/h (unloaded - at rated load)		(%)	29 - 22 / 24 - 19		37 - 30 / 33 - 27			37 - 30 / 33 - 27			37 - 30 / 33 - 27						
	Lifting speed, unloaded - at 70% of rated load		(m/s)	0.55 - 0.50		0.65 - 0.60			0.56 - 0.56			0.56 - 0.56						
	Lowering speed, unloaded - at rated load		(m/s)	0.50 - 0.60		0.55 - 0.60			0.55 - 0.55			0.55 - 0.55						
	Transmission, gears forward / reverse			3 + 3		4 + 4 with Lock-Up			4 + 4 with Lock-Up			4 + 4 with Lock-Up						
	Transmission type, function, safety			Automatic powershift / reverse protection					Automatic powershift / reverse protection					Automatic powershift / reverse protection				
	Drive axle type, service brakes (drive wheels)			Differential / hub reduction / oil-cooled wet disc brakes					Differential / hub reduction / oil-cooled wet disc brakes					Differential / hub reduction / oil-cooled wet disc brakes				
	Drive axle, parking brake, brake release			Single big dry disc / hydraulic release					Single big dry disc / hydraulic release					Single big dry disc / hydraulic release				
	Steer axle type, design, function			Heavy-duty / single cylinder / power steering					Heavy-duty / single cylinder / power steering					Heavy-duty / single cylinder / power steering				
OTHERS	Hydraulic system, type			Load-sensing (power-on-demand) / working & brake oil tank					Load-sensing (power-on-demand) / working & brake oil tank					Load-sensing (power-on-demand) / working & brake oil tank				
	Tank volumes, diesel - AdBlue ³ - oil		(dm ³)	380 / 15 ³ / 320					380 / 15 ³ / 320					380 / 15 ³ / 320				
	Noise, inside LpAZ / outside LwAZ (EDM's)		(dB(A))	63 - 67 / 103 - 107					63 - 67 / 103 - 107					63 - 67 / 103 - 107				
	Overload System with warning OLS1 + OLS3			Standard: OLS1 (lift monitor) / Optional: OLS3 (lift cut-off + tilt monitor)					Standard: OLS1 (lift monitor) / Optional: OLS3 (lift cut-off + tilt monitor)					Standard: OLS1 (lift monitor) / Optional: OLS3 (lift cut-off + tilt monitor)				

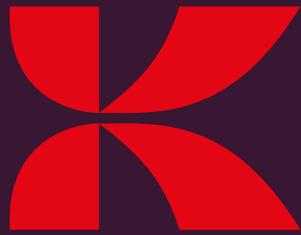
Notes:

- MPS = Full lifting capacity with MPS (8-9-10-11 tons).
HPS = Full lifting capacity with HPS incl MPS (8-9-10-11 tons).
Except DCG110-45ED87, 10 tons at 8/7-High.
- MPS = Mechanical Pile Slope in end beams - by gravity.
HPS = Hydraulic Pile Slope by 2 cylinders incl. MPS.
- On EU3 (EPA T3) engines there is no AdBlue/DEF package included.
On EU4 (EPA T4F) engines AdBlue/DEF package is included.
On EU5 (EPA T4F) engines AdBlue/DEF and DPF filter package is included.

Drivelines

Engine emission approvals	Medium Performance (MP)		High Performance (HP)	
	EU3 / Tier 3	EU3 / Tier 3	EU4 / Tier 4F	EU5
Engine emission brand/series	Cummins QSB	Volvo / D8	Volvo / D8	Volvo / D8
Engine model	QSB-6.7-C220	TAD-851-VE	TAD-871-VE	TAD-881-VE
Engine after treatment type	No SCR / no AdBlue	No SCR / no AdBlue	With SCR / with AdBlue	With SCR / with AdBlue
	No particle filter	No particle filter	No particle filter	With particle filter
Engine design / cylinders	6-inline / common rail		6-inline / common rail	
Engine displacement	(dm ³) 6.700		7.700	
Max power @ engine speed	(kW) 164 @ 2.000		185 @ 1.500-2.100	
Max torque @ engine speed	(Nm) 949		1.160	
Max engine speed	(rpm) 2.100		1.800	
Fuel consumption – average diesel	(l/h) 5 – 15		5 – 15	
Fuel consumption – average adblue	(%) -	-	1 - 5	1 - 5
Transmission model (gears FWD + RVS)	Dana TE-14300 (3+3)		Dana TE-14400-L (4+4) with lock-up	
Transmission gear shift type	Automatic powershift		Automatic powershift	
Transmission clutch type	Torque converter		Torque converter with Lock-Up	
Drive axle brand / series	Kessler / D81 - D91 (WDB)		Kessler / D81 - D91 (WDB)	
Service brake / cooling	Wet Disc Brakes with oil cooling		Wet Disc Brakes with oil cooling	
Steer axle brand / series	Kalmar / single cylinder / extra wide		Kalmar / single cylinder / extra wide	
Alternator, power	(W, V * A) AC, 1680 (28 x 60)		AC, 3640 (28 x 130)	





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