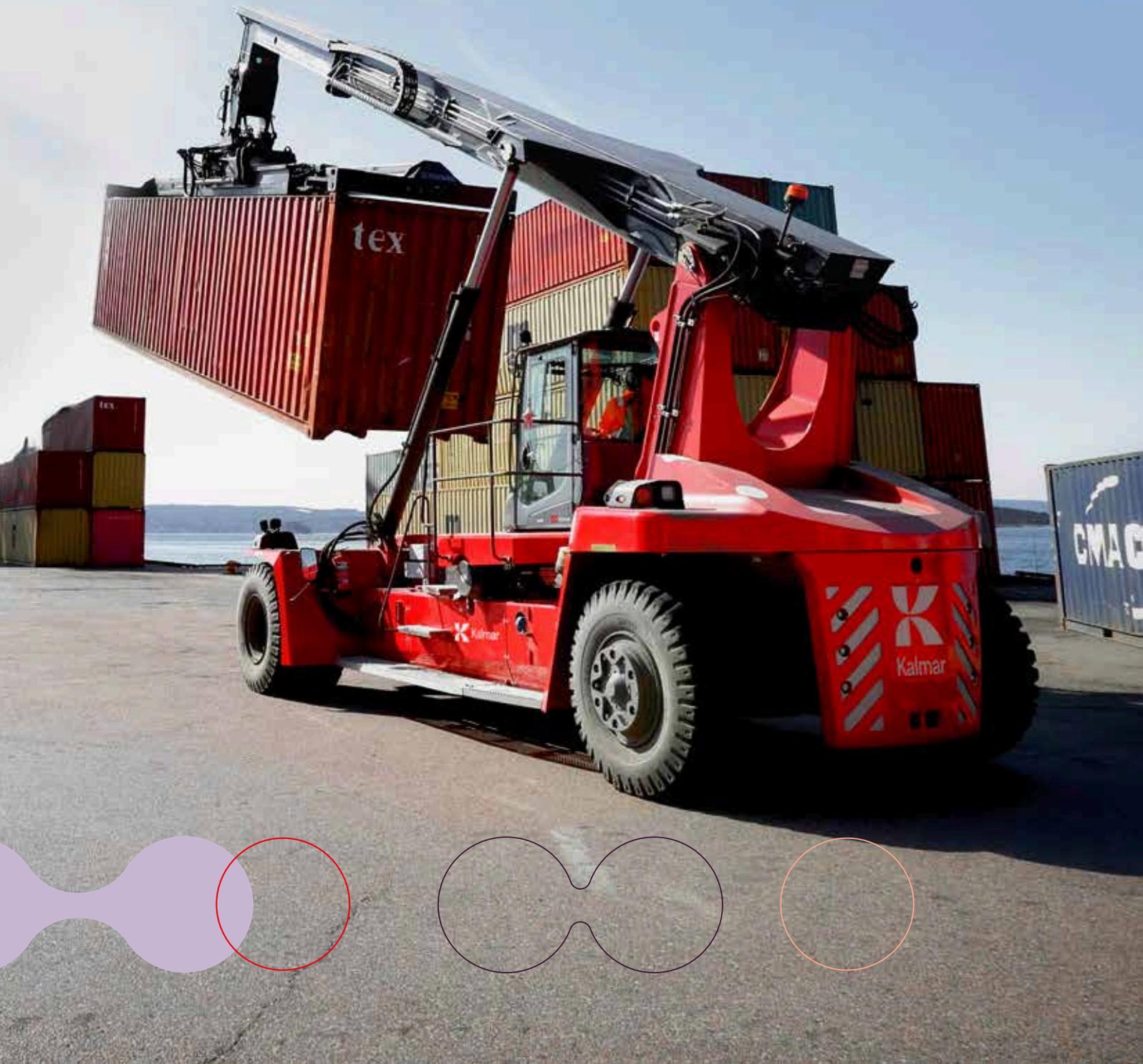




# Reachstacker for Empty Container Handling

DRG100-140 Range



# Loaded with productive versatility

The Kalmar DRG100-140. With this reachstacker for empty and semi-laden container handling you get it all. The ability to handle all sorts of containers, flat racks and slinged loads up to 14 tonnes precisely and safely.

## Ready to handle your empty containers

The Kalmar DRG100-140 has the capacity to handle all types of containers (standard ISO, reefers, tanks, specials and flat racks) and slinged loads up to 14 tonnes and can stack up to 8 containers high and three containers deep.

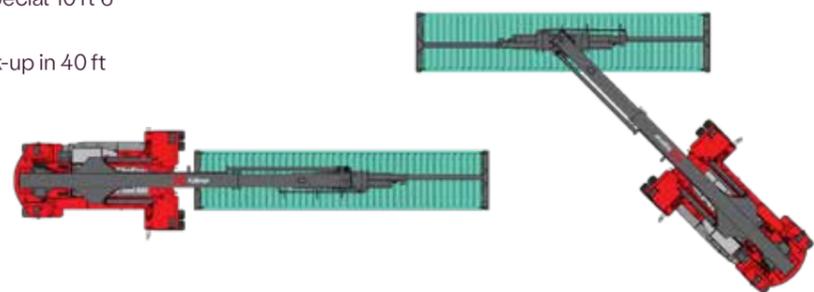
Below are the container types you will be able to handle with a Kalmar DRG 100-140:

- Standard ISO containers 20 ft – 40 ft and pick-up in 40 ft position for 45 ft – 56 ft sizes
- Standard ISO heights 4 ft – 9 ft 6 in or special 10 ft 6 in
- Reefer containers 20 ft – 40 ft (45 ft pick-up in 40 ft position)
- Tank containers 20 ft – 30 ft
- Flat racks 20 ft – 40 ft
- Slinged load in 4 lift hooks.

## Just rotate and lift

A reachstacker like the Kalmar DRG100-140 adds another dimension to empty container handling. Containers can be transported at full width, turned 45° or lengthwise at 90°, making it possible to deliver "end-on" into and through low workshop doors, port sheds and other tight openings. Operators don't have to pick up containers right-angled, and can increase efficiency and handling speed during yard stacking, loading of road trucks or container repairs.

The Kalmar DRG100-140 is the only reachstacker for empty and semi-laden container handling on the market that can offer all of these smart functions.



The ability to handle all sorts of containers, flat racks and slinged loads.

# Delivering every day

Productivity & Performance, Best Lifetime Value, Safety & Ergonomics, Environmentally-Friendly are guiding stars at Kalmar, and have made our reachstackers the preferred choice in more than 160 countries.

**Productivity & Performance.** Superior usability, operator comfort, safety, service and support maximises uptime.

**Best Lifetime Value.** Long service intervals, reliability and durability, to minimise downtime and reduce operation costs and with high residual value.

**Safety & Ergonomics.** Ergonomic design, outstanding safety, excellent visibility and ability to customize to operators.

**Environmentally-Friendly.** At the forefront of the latest technology for lower emissions whilst keeping fuel and running costs to a minimum.

## Fully equipped – safe and sound

Our G-Generation reachstackers are safe machines and the Kalmar DRG100-140 is no exception. Extremely stable – it's the only reachstacker on the market with the high-capacity 5.4 m wheelbase. It has the best combined lift capacity in rows 1-2-3, a spreader with the biggest side shift and 4 extra lift hooks, front and reverse tilts, twistlock status indicators, dual rotation motors and brakes, and a complete LED lamp kit as a standard.

The Kalmar DRG100-140 offers full flexibility with full rotation, large sideshift and tilt to allow you to both transport and perform services, maintenance, repairs and cleaning of containers and tanks with maximum efficiency. Low and narrow workshop doors don't present a problem for our reachstackers. Just turn the container lengthwise and drive inside.

## Save time and money

The Kalmar DRG100-140 is equipped with modern, high-tech and fuel-efficient Volvo diesel engines, EU3 / Tier 3, EU4 / Tier 4F or EU5 emission standards. The 6-inline engine gives you all the power and torque you need for empty and semi-laden container handling but with a lower fuel cost. Performance needs can change by the day – or even by the hour. Kalmar offers three performance modes from which to choose, based on your needs for productivity, profitability and performance.

### Power

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

### Normal

for normal productivity and yard operations, you can expect up to 15% lower fuel consumption without compromising on productivity.

### Economy

for off-peak or night time operations when productivity is not essential or lower noise levels are required, you can expect up to 25% lower fuel consumption.

Save up to **15%**

Save up to **25%**

40' container handling.



20' container handling.



# Productive and efficient

The highest productivity and the best lifetime value.

## 10,000 good reasons to choose Kalmar

The Kalmar DRG100-140 is built on our latest technology platform, G-Generation, which is based on our experience from our more than 10,000 reachstackers sold. Our goal was to provide the most outstanding operator experience, the highest level of productivity and the best lifetime value. An ergonomic cabin, integrated components, an electrical control system, a high degree of automation and intuitive, digital interfaces are just a few of the standard features.

## Make every move count

When choosing the right machine for you, consider the full value. Kalmar reachstackers excel at reducing your total cost of ownership. With well-proven quality materials, durable components and sturdy design, the Kalmar DRG100-140 is a profitable choice. Extremely reliable, it optimises uptime and minimises operational and maintenance costs on a daily basis – but also in regards to lifetime value.

We are fully prepared to provide rapid support for the entire life cycle of your machine, before it leaves the factory floor. With Kalmar you also have the industry's most extensive support and after-sales network at your disposal. Our global presence and local service 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? Our aim is to protect your investment, which is why our top priority is to minimise the costs of unnecessary downtime. This is also helps explain why Kalmar reachstackers consistently maintain one of the highest resale values.

## Save time and money

The Kalmar DRG100-140 is equipped with modern, high-tech and fuel-efficient Volvo diesel engines, EU3 / Tier 3, EU4 / Tier 4F or EU5 emission standards. The 6-inline engines give you all the power and torque you need for empty and semi-laden container handling but with a lower fuel cost. Performance needs can change by the day – or even by the hour. Kalmar offers three performance modes from which to choose, based on your needs for productivity, profitability and performance.

The Kalmar DRG100-140 also offers longer service and maintenance intervals, which cuts costs and increases uptime. The machine is easy to access for service. And Kalmar's extensive, swift global service and after-sales network makes sure your uptime is maximised.

### Service intervals for DRG reachstackers.

Description	Check (hours)	Filter (hours)	Oil (hours)
First Machine service	500		
Working hydraulics (return line – no oil sample)		1 000	4 000
Working hydraulics (return line – with oil sample)		1 000	4 000 – 10 000
Working hydraulics (fine filter longlife)		500	
Engine (no oil sample) – Volvo EU4/EPA 4-Final		500	1 000
Engine (no oil sample) - Volvo EU3A/EPA 3		500	500
Transmission		1 000	1 000
Drive axle <sup>1)</sup>			2 000
Spreader rotation hydraulic motor <sup>1)</sup>			2 000

1) First oil change & filter change at 500 h – then after every 2 000 h

# Boosting the core of efficiency

Reachstackers are only as good as their operators. So to make sure they can operate on a high level, we handle them with care. The EGO cabin of the Kalmar DRG100-140 offers an outstanding working environment and driving experience. The result is less downtime, fewer cargo damages and more alert, productive and healthy operators.

## Experience the best

The EGO cabin is the result of our insight into operating conditions across the world, years of development and thousands of tests. It provides a seamless operating environment that minimises fatigue and enables optimal load handling.

## Endless visibility

The open cabin design features slim profiles, no A-pillars and a wide-curved, corner-wrapped windscreen. With a near absence of blind spots, visibility is optimised at all angles. The windscreen is equipped with unique high-capacity double wipers, and the roof with a single wiper. These dry and clean the surface to ensure visibility in wet and dirty conditions. The best you can get!

## Stay in control naturally

The main operation work console, switches and indicators for data display and machine control systems are logically organised and well placed within sight and reach.

Fully equipped with electronic tools and an easy-to-use Kalmar Information Colour Display with intuitive Human-Machine Interface (HMI). All check-ups are

easy to perform – you can see, hear, touch and react to inputs on the machine's performance without losing focus on your load. The intuitive Head Up display allows you to monitor loading and unloading as symbols shift from green to yellow to red, showing the twistlock and support jack status.

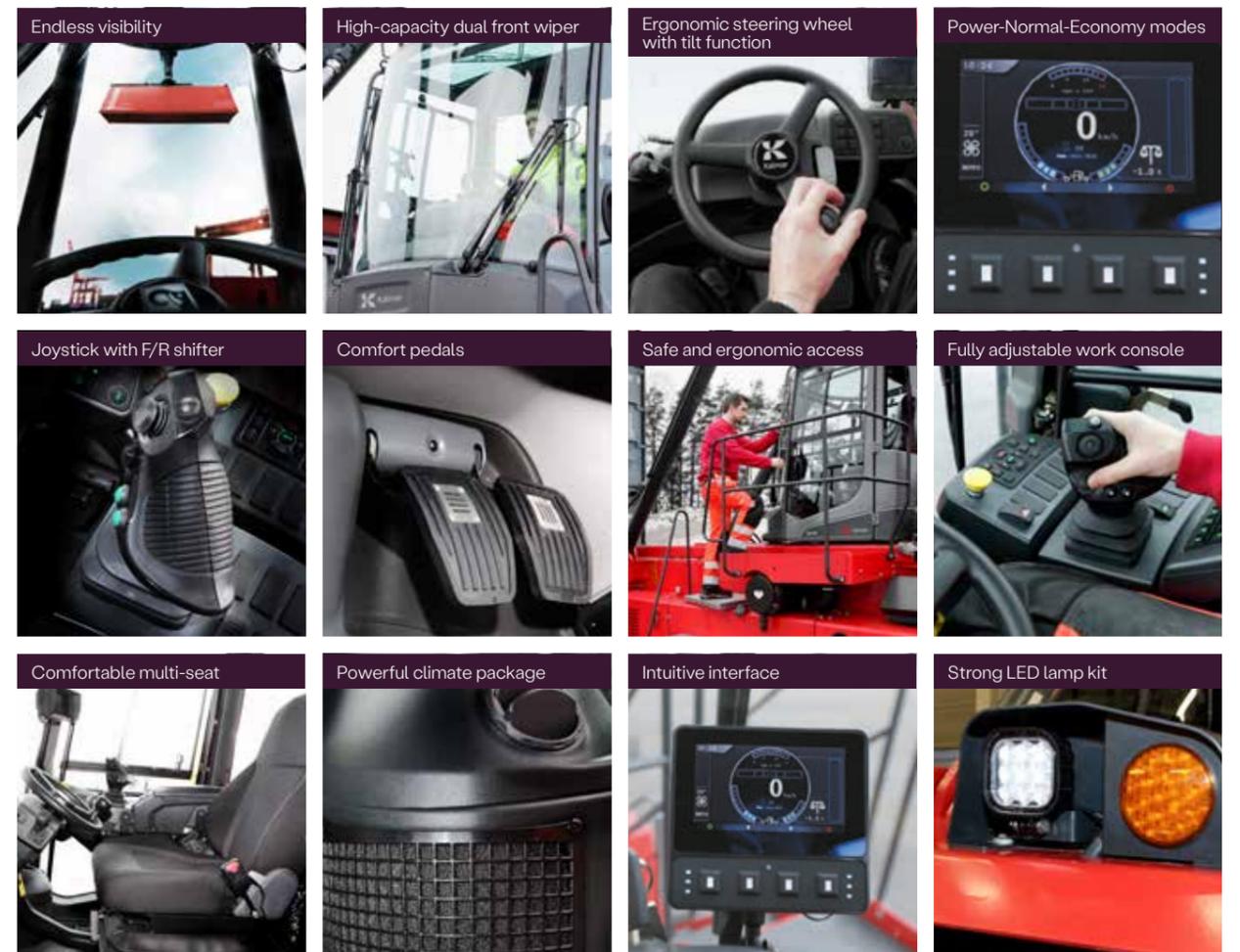
## Superior ergonomic design

The patented side-tilting steering wheel can be angled to the side or moved forwards slightly to avoid obstruction and increase comfort. It also provides better control of loads and allows new steering possibilities.

The patented with a built-in directional shift knob (forward/ reverse shifter) stays firmly secured in position for smooth, safe directional changes while optimising lifting capacity and ergonomically reducing arm fatigue.

The fully integrated, adjustable multi-seat provides the best possible sitting posture for long shifts and demanding operations. The ergonomically designed comfort pedals are floor-based to minimise strain on the foot while enabling hard driving.

Our standard Climate Package is the most powerful on the market. It has the highest capacity heater, cooling and filtered airflow for super interior comfort.

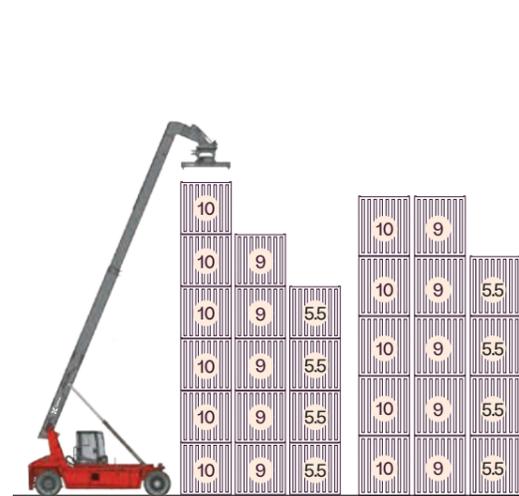
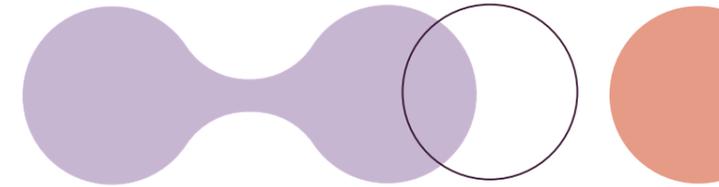




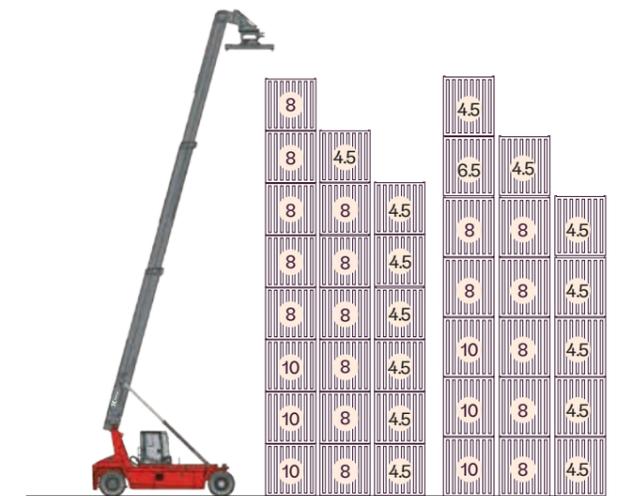
# Four highly productive models

The DRG100-S6, DRG120-S6 and the DRG140-S6 stack 6-high in the first row with container loads up to 10, 12 and 14 tonnes, respectively.

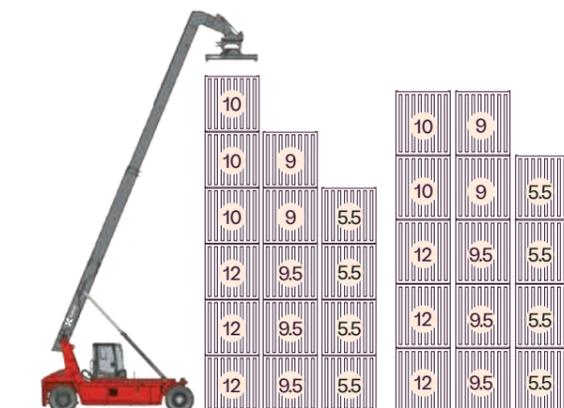
The DRG100-S8 stacks 8-high and up to 10 tonnes in the first row.



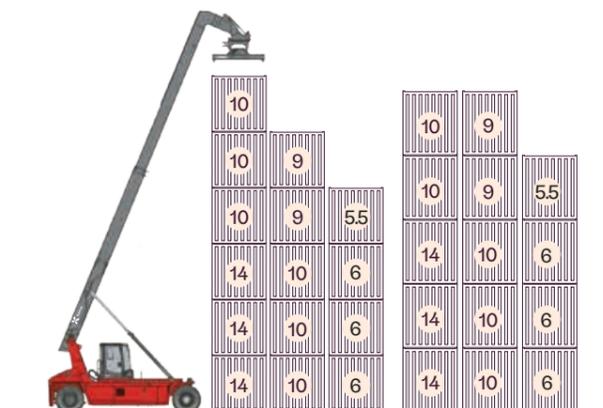
DRG100-S4S6



DRG100-S4S8



DRG120-S4S6



DRG140-S4S6

# Upgrade options



 A quality build with high availability and excellent productivity.

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



**Rear mounted camera.** Knowing what's going on behind you is critical when other personnel are present. A rear mounted camera can provide real time information to an in-cabin display, helping improve personnel and driver safety. You can also add a Reverse Warning System, with both camera and rear ultrasonic sensors, to further increase your level of safety.



**Additional lighting.** Extra LED lighting brings greater operational visibility and safety for personnel working at your site, particularly at night. You can choose from:

- Flashing LED brake lights when reversing
- Additional LED lights on the boom (front or middle), spreader, front mudguards, cabin roof or rear.



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



**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 rechargeable water tank. This can be activated manually or automatically through an in-cabin temperature sensor.

## Kalmar has a range of options that make operating your equipment more productive.



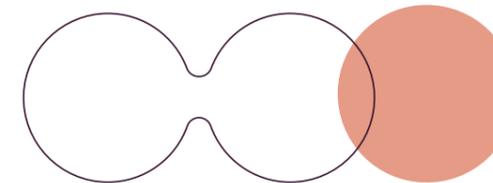
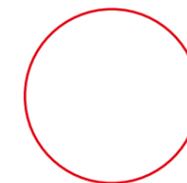
**Tyre Pressure Monitoring System.** Helps to reduce wear and tear on tyres which results in reduced fuel consumption. Bluetooth sensors keep the driver advised of the condition of the tyres. Active care of your tyres can result in a 10-40% increase in tyre life and up to a 10% decrease in fuel consumption.



**Various speed limiters.** Allows you to program and set various speed limits to reduce fuel consumption, improve operational safety, cater for area speed restrictions, lift heights and loads to be transported. These settings cannot be exceeded by your drivers.



**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.



\* Not suitable for electric battery fires.



# Safety fitted as standard

**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.

## **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.



**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.** 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.



**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.



**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.



**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.



**Anti-slip Protection Tape on fenders and tanks.** Anti-slip Protection Tape provides additional traction on fenders and tanks to reduce any slipping hazards for driver's and maintenance personnel while working on your Kalmar Reachstacker.



**Reverse Camera System.** Knowing what is going on behind you is critical when reversing your Kalmar Reachstacker, which is why they are all fitted with a high resolution [1080p] cabin display screen and reversing camera providing excellent rearward visibility.



**Speed Limiter outside transport mode.** Makes sure your Kalmar Reachstacker is always operating at a safe speed when it isn't carrying a load, helping to reduce the risk of accidents and promoting safe operating practices.



**Towing Coupling with removable pin.** Should something go wrong with your Kalmar Reachstacker we have made it safer to use both tow bars and tow slings making it quicker and easier to recover your machine.



# Keep moving with Kalmar Services

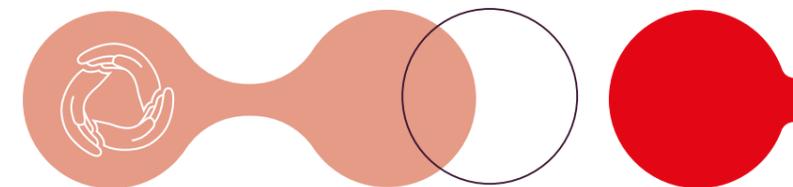
To keep your business moving Kalmar Services offers a range of services that can help you keep your equipment moving optimally.

## 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.



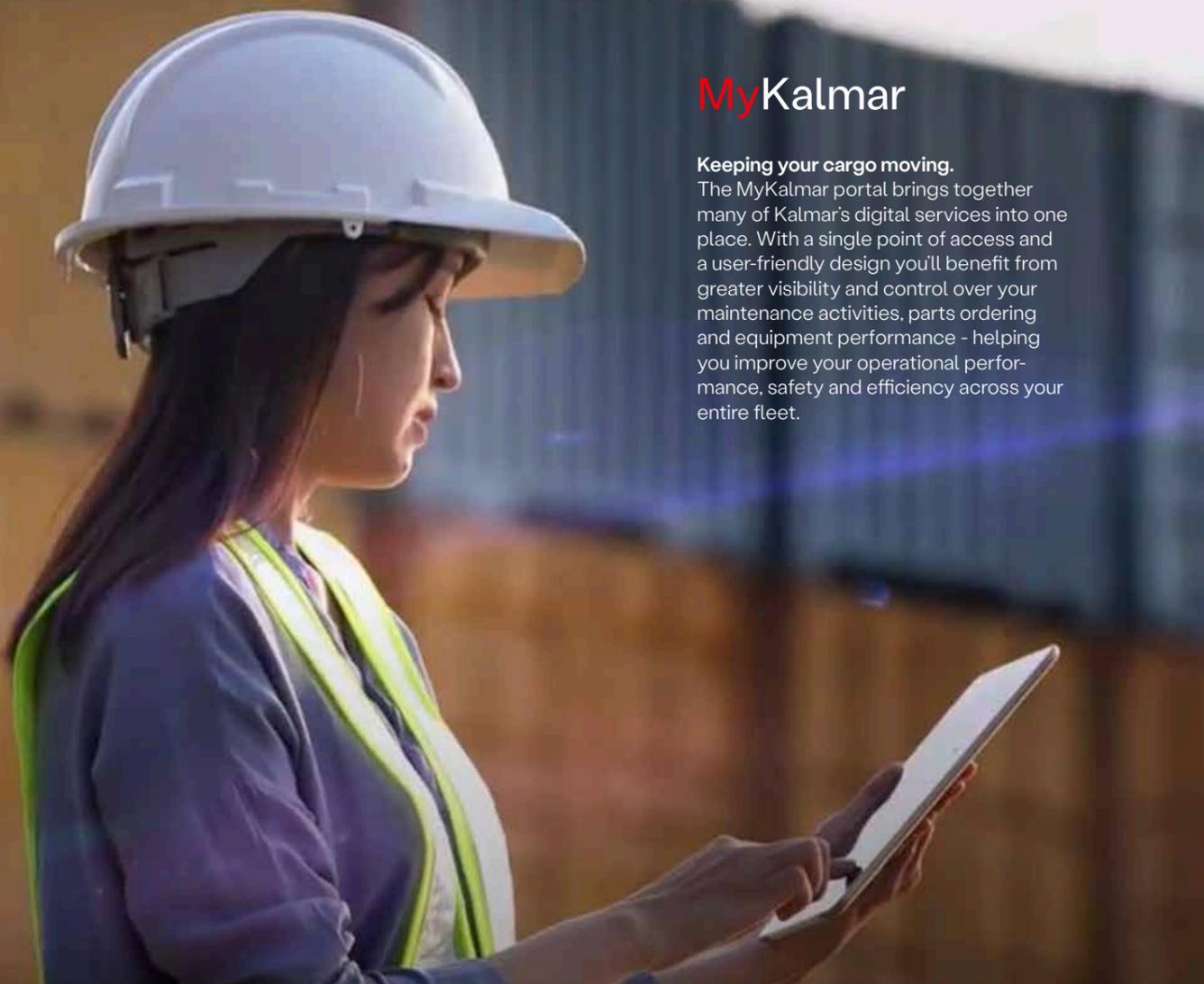
#### On Demand Care

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.

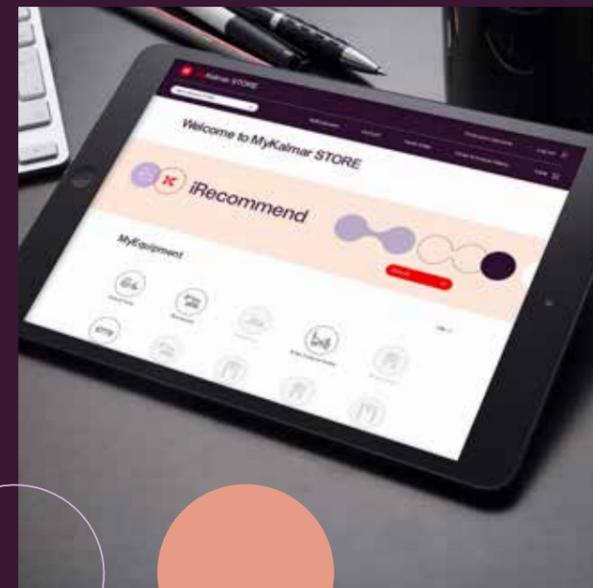
## Kalmar Insight

**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.

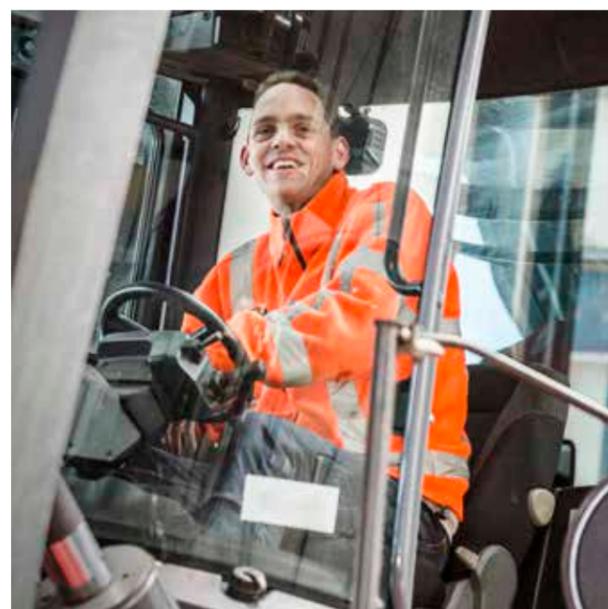


## MyKalmar STORE

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 DRG100-140, S6-S8, 10-14 tonnes**

**Norms, standards and regulations**

- Machinery Directive 2006/42/EC
- Safety Industrial Trucks Standard ISO 3691-2, (EN 1459+A3)
- Safety Low & High Lift Trucks Standard ANSI / ITSDF B56.1
- Stability of Reachstackers Standards ISO 22915-1, -12
- Electrics / Electronics Standard EN 1175
- Electromagnetic Compatibility Directive 2014/30/EC
- Electromagnetic Compatibility Standard EN 12895
- CE-marking (EU/EEA)
- ANSI / ITSDF-marking Forklift Trucks (USA/CAN)
- AS-marking (Australia)
- UKCA-marking (UK)
- Supply of Machinery (Safety) Regulations 2008 (UK)

**Chassis**

- Strong and durable heavy-duty chassis
- Safe access steps, platform & hand rails (LHS)
- Long bottom access step
- Lifting eyes and achor points (front & rear)
- Good rear end visibility of the truck
- Towing pin (rear - incasted)

**Body**

- Steps with anti-slip protection
- 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
- Orbitrol power steering with double acting cylinder

**Drive Axle (front)**

- Kessler planetary axle with differential drive
- Wide axle for high side stability (4150 mm)
- Oil-cooled Wet Disc Brakes (WDB)
- High pressure filter (10 mµ) for the brakes
- Brake tank (100 lit), cooling & breather filter

**Wheels (Tyres & Rims)**

- Drive tyres 14.00x24/PR24 (4x)
- Steer tyres 14.00x24/PR24 (2x)

**Driveline**

- Emission approval EU3 / Tier 3, EU4 / Tier 4 or EU5\*
- 6-cylinder diesel engines with pre-heater
- High power & torque with low fuel consumption
- Engine monitoring and protection system
- Fully automatic transmission

Dana / FLTE-14456

- Transmission monitoring and reverse protection
- Declutch function activated by pedal switch
- Heavy-duty radiators for engine + transmission

**Load-Sensing Hydraulics**

- Load-sensing variable piston pumps (3x)
- Pumps for boom, spreader, brakes & steering
- Vane pumps for brake & oil cooling (2x)
- Return filters for the work hydraulics (2x/10 mµ)
- Hydraulic longlife fine filter with by-pass (5 mµ)
- Servo filter for the work hydraulics (10 mµ)
- Pressure filter for the brakes (10 mµ)
- Regeneration high-speed lifting & extension
- Boom end-damping (in-out/up-down/20-40°)
- Power steer, power brakes & ORFS-couplings
- Hydraulic tank (425 lit), cooling & breather filter
- Separated dual oil tanks

**Lifting boom**

- Strong, durable box-type boom with guide pads
- Duplex 2-stage S6
- Triplex 3-stage S8
- Long boom nose for flat racks (H4 = 600 mm)
- Boom with 2 lift cylinders & 1 extension cylinder

**Attachment**

- Top lift 10-14 tonnes, hydraulic extension 20'-40'
- 4 floating twistlocks & indication LED lamps
- Safety locking, alignment pins & sensors (4x)
- Large sideshift of ±1000 mm
- Rotation +195/-105 deg (2 motors & 2 brakes)
- Mechanical Pile Slope MPS ±5 deg
- Lift hooks for slings on end beams (4x)
- Tilt lock, container at 90 deg (max 5 km/h)

**Electrical system 24V**

- Battery box 2x12V & main power switch
- Electric service box on chassis (LHS)
- 2 working LED-lights on attachment
- 2 working LED-lights on boom
- 2 working LED-lights on front edge cabin
- 2 rear LED-lights on fenders (when reversing)
- 2 head light LED on front fenders
- 2 position LED-lights on each side
- 2 tail LED-lights / brake LED-lights
- 4 LED-blinkers (front-rear/left-right)
- 2 flashing brake LED-lights (when reversing)
- 1 rotating warning LED-beacon
- 1 accoustic signal / reverse alarm (in reverse)

**Cabin**

**Structure**

- Spacious, modern cabin with best ergonomy
- Large windows, good visibility, in all directions
- Manual moveable cabin (stroke 1750 mm)
- 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
- 2x24V el. connection in door columns (L + R)
- 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

**Safety**

- Colour display TFT-7" (17 cm), inside cabin
- Reverse camera, 1x, rear on counter weight
- Speed limit outside transport mode

**Controls**

- Joystick for boom, spreader & forward / reverse
- Auto rev-up accelerator at lifting/extension
- Electric accelerator pedal (hanging)
- Double brake pedals (L + R)
- Button for electronic hand brake (on/off)
- Automatic gear shifting (P1)
- Only first gear activated (P2)
- Only second gear activated (P3)
- Safety override for hydraulic functions (by code)
- Multi-function lever LHS (horn, gear/direction switch, high/low beam)
- Warning - hand brake (on/off) leaving seat
- Hour meter

**Climate**

- ECC, electronic climate control (heater, ventilator and filter)
- Air-condition incl. 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**

- Colour display & automatic fault analysis
- Menu control with toggle wheel & push buttons
- Electronic safety, overload, scale & synchronized lift
- LLMI Longitudinal Load Moment Indicator
- LLMC Longitudinal Load Moment Control

**ECO Drive Modes (EDM):**

- Power mode
- Normal mode
- Economy mode

**Operator menu**

- System voltage
- Actual gear
- Engine rpm
- Travelling speed (km/h or m/h)
- Hydraulic oil temperature
- Transmission oil temperature
- Engine oil pressure & coolant level
- Engine oil level)
- Clock and date
- Load & Load distance (LC)
- Boom extension & Boom angle
- Operating time (hours)
- Service time indicator (hours)
- Boom angle and boom extension
- Electronic weight scale functions
- Status of heating system & AC system
- Fuel level (diesel and optional AdBlue)
- Estimated operating time before empty tank (hour/min)
- Service indicator
- Container counter with reset function
- Trip computer / statistics

**Pop-up menu**

- Overload warning
- Overload warning steering axle (high or low)
- Head-Up display for twistlock indication:
  - LED indicators for alignment & twistlocks

**Various warning lights & signals**

- Charging battery
- Low brake pressure
- Failure indicator
- Safety system disconnected
- High engine coolant temperature
- Low engine coolant level
- Low engine oil pressure
- Preheating engine
- Transmission oil temperature
- Low fuel level
- Hydraulic oil temperature

**Indicator lamps**

- High beam
- Direction indicator
- 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 & joystick stickers
- Fuse diagram
- Instruction manual
- Maintenance manual, digitally
- Spare parts catalogue, digitally

# Options

**Kalmar DRG100-140, S6-S8, 10-14 tonnes**

- DRG100-54S6 (L3=5400 mm / 6-high 8'6")
- DRG120-54S6 (L3=5400 mm / 6-high 8'6")
- DRG100-54S8 (L3=5400 mm / 8-high 8'6")
- DRG140-54S6 (L3=5400 mm / 6-high 8'6")

**Chassis**

- DRG ranges in Toplift (S)
- Wheelbases: 5400 m

**Body**

- Anti slip protection on fenders and tanks
- Mud flaps (front or/and rear)
- External rear view mirror 2/pc
- Long bottom access step (on right hand side)

**Steer Axle (Rear)**

- Steer cylinder spacer (less tyre wear)

**Wheels (Tyres & Rims)**

- Spare wheels, tires and rims for 14.00×24/PR24

**Driveline**

- Cummins QSB-6.7-C220 - 165 kW (EU Stage 3A / EPA Tier 3)
- Volvo TAD-851-VE - 185 kW (EU Stage 3A / EPA Tier 3)
- Volvo TAD-881-VE - 185 kW (EU Stage V / EPA Tier 4f)
- Start/stop function to save fuel
- Automatic engine and ignition stop at idle
- Precleaner air intake incl raised air intake
- Speed limitation
- Wheel nut protection on steer tyres

**Hydraulics**

- High pressure filter

**Electrical system 24V**

- Radio with CD/MP3
- 2x24V + 12V/5V USB sockets in door columns (L+R)
- 2x24V + 2x12V sockets in door columns (L+R)
- Electric air pressure horn
- Height limitation system for lifting boom
- Load center limitation for lifting boom
- Speed limitation, please specify km/h
- Container lights, LED 4x, on front mudguards
- Extra working light, LED 2x, on spreader
- Extra working light, LED 2x, on boom middle
- Extra working light, LED 4x, on boom front
- Electric heated mirrors, front fender/std pos
- Electric heated & adjustable mirrors, front fenders/std pos

**Cabin**

**Structure**

- Hydraulic tilting cabin (stroke 0-10 degrees)
- Step for roof access

**Comfort**

- Seat with Air-cushion, heating & 3-p belt
- 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)

**Controls**

- Lever steering incl switch for forward/reverse
- Mini-wheel steering incl switch for forward/reverse
- Essential joystick - Elobau
- G-Generation joystick - EGO

**Climate**

- Sun visor front window
- Sun visor roof window
- Sun visor rear window
- Microfilter in additional to std filter
- AC/ECC switched off when door is open
- Postheating

**Additional equipment**

- Camera with monitor in cab direction rearward (6–7 m)
- Diesel powered cabin heater 5 kW
- Alcolook Draeger in cabin
- Automatic fire suppression system (Dafo)
- Fire extinguisher 5-6 kilos, powder
- Tool kit
- 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
- Filter kit 2000 hrs
- Soft landing function with ultrasonic sensor

**Safety**

- Reverse warning system including sensors
- Tyre pressure monitoring system
- Seat belt interlock (machine will not go in gear if seat belt is off)
- Front chassis camera, 1x, above drive axle
- Front of outer boom, 1x, facing forward
- Below inner boom, 1x, facing forward
- Twistlock cameras, 2x, in spreader end beams
- Combi legs camera, 2x, facing down on trailer
- Reverse warning system, TFT-7" display, reverse camera, 4 rear sensors
- Forward warning system, TFT-7" display, reverse camera, 4 rear sensors

- Alcolock Draeger in cabin
- Height limitation system for lifting boom, specify height
- Including load center limitation for lifting boom
- Semi-automatic fire suppression system
- Speed limitation, please specify km/h
- Various speed limitations (with/without load)
- Speed warning at 15km/h
- Speed limitation (default setting 19km/h)

**Fleet Management**

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

**Attachment (toplift)**

- Tilt function ±5 deg (fwd/rev), incl tilt lock & speed limit 5 km/h
- Rotations stop spreader ±25 deg + override switch
- Automatic extension 20'-40' incl 30' stop

**Colour**

- Other colour than std. chassis
- Reinforced anti-corrosion protection

**Documentation and Decals**

- Extra set of documentation
- Workshop manuals
- Volvo trouble shooting and repair kit
- Load chart lbs/inch in cab & sign "no riders"
- Documentation on CD or memory stick
- Maintenance manual, printed
- Spare parts catalogue, printed

**Training**

- Various training packages, for drivers, service, maintenance, software etc
- Contact Kalmar Training Centre for more information and planning

**Warranty**

- Extended warranty packages available - please contact your local Kalmar Sales representative

# Specifications

		Model		DRG100-54S6	DRG100-54S8	DRG120-54S6	DRG140-54S6
MODEL LIFTING CAPACITY	Lift capacity, row 1-2-3-4	Q1 - Q2 - Q3- Q4	tons	10 - 9 - 5.5	10 - 8 - 4.5	12 - 9.5 - 5.5	14 - 10 - 6
	Lift capacity, row 1-2-3-4 (with jacks)	Q1 - Q2 - Q3- Q4	tons	-	-	-	-
	Load centre, from front face of tyres, row 1-2-3-4	L4 - L5 - L6 - L7	mm	2690 - 3840 - 6340			
	Stacking capacity, in container row 1-2-3-4 of 8'6" / 9'6"		mm	6/5 - 5/5 - 4/4			
	Lost load centre, to front face of tyres	X	mm	700			
	Wheelbase	L3	mm	5400			
WEIGHTS	Service weight, standard truck <sup>1</sup>		kg	39000	40800	39200	40400
	Axle load, front at load centre L4, unloaded - loaded (no jacks)	(no jacks)	kg	22300 - 38600	23900 - 40200	22600 - 42200	22600 - 45400
	Axle load, front at load centre L5, unloaded - loaded (no jacks)	(no jacks)	kg	24100 - 40700	25500 - 40200	24400 - 41900	24400 - 42800
	Axle load, rear at load centre L4, unloaded - loaded		kg	16700 - 10400	16900 - 10600	16600 - 9000	17800 - 9000
	Axle load, rear at load centre L5, unloaded - loaded		kg	14900 - 7300	15300 - 8600	14800 - 6800	16000 - 7600
DIMENSIONS	Boom angle, min - max		deg	0 - 67.5	0 - 74.8	0 - 67.5	0 - 67.5
	Boom height, min - max	H3 - H5	mm	3900 - 18700	4050 - 24150	3900 - 18700	3900 - 18700
	Chassis height - top of boom fixation, max	H2	mm	3650			
	Lift height, min - max	H4	mm	600 - 16200	1100 - 21150	600 - 16200	600 - 16200
	Boom reach stroke		mm	7200	12200	7200	7200
	Truck height - seat height	H6 - H8	mm	4225 - 2200			
	Overall truck length with boom	L	mm	11200			
	Truck width over drive axle	B	mm	4150			
	Spreader sideshift	V1	mm	+/-1000			
	Spreader rotation		deg	==+195/-105			
	Ground clearance	min	mm	240			
	Aisle width with 20'-40' container	A1 - A2	mm	11200 - 14200			
	Turning radius, outer with 20'-40' container (at 90 degree turn)	R1 - R3	mm	7000 - 8600			
Turning radius, outer (at 90 degree turn)	R1	mm	-				
WHEELS	Wheels	Number of wheels, front – rear (x = driven)		4 – 2			
	Tyres	Pneumatics, type / pressure (front - rear)	MPa	Diagonal / 1.0			
		Dimensions, front – rear	tum	14.00x24" / PR28			
	Rims	Dimensions, front – rear	tum	10.00x24"			
		Track width (front - rear)	S1 - S2	mm	3280 - 2600		
AXLES	Steer axle	Manufacturer, type - designation		Kalmar steer axle / hydraulic power steering / double acting single cylinder			
	Drive axle	Manufacturer, type - designation		Kessler - D81PL489-NLB - Differential - planetary hub reduction			
	Service brakes	Type – affected wheels		Oil cooled wet disc brakes (WDB) / drive wheels			
	Parking brake	Type – affected wheels		Single dry disc / spring activated - hydraulic release / drive wheels			
HYDRAULICS	Hydraulics	System type / pump type		Load-sensing function / power-on-demand / variable piston pumps			
	Oil pressure	Max working pressure boom / spreader	MPa	23 / 16			
	Tank	Oil volume	Lit	625 (525 + 100)			
		Fuel tank, capacity	Lit	525			
		AdBlue tank, capacity	Lit	35			

Notes:  
1. Service weights / axle loading: values with standard configuration.

# Performance

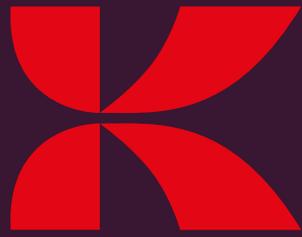
		DRG100 - 140	
MODELS	Models		
	Wheelbase	mm	5400
SPEEDS	Travel speed, forward - reverse	Unloaded / at rated load	km/h
	Lifting speed	Unloaded / At 70 % of rated load	m/s
	Lowering speed	Unloaded / At rated load	m/s
POWER	Gradeability, max	Unloaded	%
		At rated load	%
	Gradeability, at 2 km/h	Unloaded	%
		At rated load	%
	Drawbar pull		kN
SOUND	Noise level, inside EGO cabin*	EN12053, LpAZ	dB(A)
	Noise level, outside*	EN12053, LWAZ	dB(A)
	Noise level, outside*	2000/14/EC, LWAZ	dB(A)

Notes\*:  
1. With Eco Drive Mode (EDM) drivetrain settings included.  
2. Eco, Normal and Power (various rpms)  
3. Noise levels: Volvo TAD-851-VE: 72 - 75 / 107 - 109 dB(A)  
4. Noise levels: Volvo TAD-881-VE: 68 - 70 / 105 - 107 dB(A)  
5. Noise levels: Cummins QSB6.7: 68 - 70 / 106 - 108 dB(A)

# Drivetrain

		Cummins	Volvo	Volvo	
MOD-ELS	Models				
	Wheelbase	mm	5400	5400	
ENGINES	Drive motor, manufacturer - type designation	QSB-6.7-C220	TAD-851-VE	TAD-881-VE	
	Fuel types, motor type*	Diesel / HVO / 4-stroke	Diesel / HVO / 4-stroke	Diesel / HVO / 4-stroke	
	Turbo charger / cooling	Turbo (FGT) / Intercooler	Turbo (FGT) / Intercooler	Turbo (FGT) + EPG / Intercooler	
	Engine after treatment type	No AdBlue, DOC, DPF, ASC and SCR	No AdBlue, DOC, DPF, ASC and SCR	With AdBlue, DOC, DPF, ASC and SCR	
	Diesel particle filter (DPF)	No DPF	No DPF	With DPF	
	Emission standards	EU Stage IIIA / EPA Tier 3	EU Stage IIIA / EPA Tier 3	EU Stage V / EPA Tier 4f	
	Rated power / at revs (ISO 3046)	kW / rpm	164 / 2200	185 / 2200	
	Peak power / at revs (ISO 3046)	kW / rpm	172 / 2000	185 / 1600-1900	
	*Peak torque / at revs (ISO 3046)	Nm / rpm	949 / 1500	1160/1350	
	Number of cylinders / displacement	lit (in3)	6 / 6.7 (408)	6 / 7.7 (470)	
	Fuel consumption, normal driving*	lit/h	7 - 14	7 - 14	
	AdBlue consumption, normal driving	%	-	-	
	TRANSMISSION	Manufacturer's type designation		Dana / FLTE-14456	
Clutch, type			Lock-up Torque Converter		
Transmission, type			Hydrodynamic automatic		
Eco Drive Mode (EDM) drivetrain settings			3 modes / Eco, Normal & Power		
Numbers of gears, forward / reverse		gears	4 / 4	4 / 4	4 / 4
Alternator, type / power		W	AC - 1960 (28/70)	AC - 3640 (28/130)	
Starting battery, voltage / capacity		V / Ah	2x12 – 135-145	2x12 – 135-145	2x12 – 135-145

Notes:  
1. Regular diesel based on EN590 (ASTM D975 no. 2-D)  
Synthetic / paraffinic diesel based on EN 15940.  
2. AdBlue / Diesel Exhaust fluid (DEF) doser unit  
Diesel Oxidation Catalyst (DOC)  
Diesel Particulate Filter (DPF)  
Selective Catalyst Reduction (SCR)  
Ammonia Slip Catalyst (ASR)  
3. With Eco Drive Mode (EDM) drivetrain settings included.  
Eco, Normal and Power (various rpms)



Kalmar

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