Kalmar

Eco Reachstacker

DRG450E-700E Range

Reduce fuel costs, lower emissions

Increasing fuel costs and tougher emissions standards means you need a solution that is lean and green, while still maintaining the highest levels of operational productivity.

The Kalmar Eco Reachstacker provides you with an eco-efficient solution that will have a positive financial impact on your business. It uses up to 40% less fuel than older machines and 25% less than more recent machines, reducing your fuel costs and lowering your emissions significantly while matching the productivity levels of machines with much bigger engines.

Eco-efficiency at work

Reducing the fuel consumption of your equipment also reduces your emissions, which will enhance your environmental reputation and help you meet current and future emissions standards.Together we can shape the future of cargo handling, with safe and eco-efficient solutions that improve your every move.

Proven in the field

Over 150 customers using more than 500 Eco Reachstackers are already benefiting from substantially reduced fuel consumption and CO_2 emissions around the globe, proving that this technology not only delivers on the promised savings but also on performance.

The Kalmar Eco Reachstacker can offer your business:

- Up to a 40% reduction in fuel costs and consumption.
- Up to a 40% reduction in CO_2, NO_x, SO_x and particulate emissions.
- A significant reduction in operating noise for your operators and others nearby.
- An ergonomically designed cabin for operational ease.
- A much smoother drive, which will reduce stress and pressure on your driver's body.

Lean and green while maintaining the highest levels of productivity.

Guaranteed to save you thousands

Quiet and eco-efficient
Cabooter Group, currently operate one barge and two rail terminals in the Netherlands and have been a long term partner of Kalmar. They turned to Kalmar first, when they were looking for a solution that was both eco-effiicient and would significantly reduce operational noise levels, as their terminals are in built up urban areas.

"We chose the Kalmar Eco Reachstacker as we felt it represented the next big step in product innovation. It provides us with a low emission solution that is also significantly quieter. From the start our fuel consumption dropped from 15.7 to 12.9 l/hr, reducing our costs significantly. Our drivers are extremely excited as it is like driving a new Ferrari, not an old Volkswagen. This new generation of reachstackers, that is really good."

Peter Pardoel, Business Development and Operational Excellence. Cabooter Group.

Knowing exactly what your fuel costs are going to be each month gives you a greater level of financial predictability, which is why Kalmar is offering a Fuel Saving Guarantee with each of its Eco Reachstackers.

Guaranteed to deliver

With an agreed and fixed level of fuel consumption, based on a set of agreed metrics, you'll have complete control over your variable fuel costs. Should the fuel usage levels exceed the guaranteed levels of fuel consumption, Kalmar will compensate you for the additional fuel cost with a one off payment.

The fuel saving guarantee also provides your drivers with specialist training so they can get the most out of the machine. You also get connected with Kalmar Insight, giving you the ability to track and monitor your reachstacker and take immediate actions to optimise its operational efficiency. This will substantially help to reduce your cost per move.

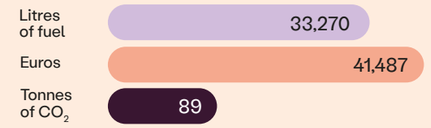
Guaranteed to cut costs

Your Eco Reacstacker is guaranteed to use less fuel, cutting your fuel costs substantially. This reduction in fuel costs will also cut your costs per move, helping you to be more competitive in a tough market.

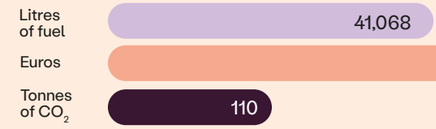
Delivering fuel savings

Based on years of real operational data collected through Kalmar Insight, you can see the clear reduction in fuel costs and emissions between older machines and our new Kalmar Eco Reachstacker.

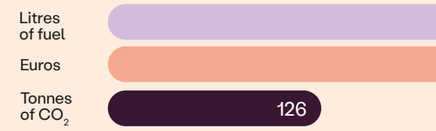
ECO REACHSTACKER
Typical operating data for 2000 hours of operation.



5 YEAR OLD MACHINE
In comparison, an Eco Reachstacker will reduce your fuel costs **up to 25%.**



10 YEAR OLD MACHINE
In comparison, an Eco Reachstacker will reduce your fuel costs **up to 40%.**



Calculations and assumptions: Fuel consumption data has been collected over a six month period using Kalmar Insight with an Eco Reachstacker, a 5 year old and a 10 year old reachstacker operating normally, with comparable idling time. We have used the following metrics for these calculations: 2000 operating hours per year, fuel at 1.25€ a litre and 2680 grams of CO_2 being produced per litre of fuel used.

Reduce your emissions further

HVO100 fuel

HVO 100 or other synthetic fuels can reduce the emissions of Kalmar Eco Reachstackers fitted with a certified Stage 3, 4 or 5 Volvo engine by up to 90% when substituted for regular diesel, making them one of the most eco-efficient reachstackers on offer today.

HVO (Hydrogenated Vegetable Oil) is made from 100% renewable items and is free from any fossil fuels. It is produced by using vegetable oils and animal fats and has a chemical structure similar to diesel fuel.

This similarity allows it to be substituted for diesel, without any impact on the efficiency of your driveline but with a big impact on your emissions.

Newell and Wright Group reduce emission by up to 90% with HVO.

"We are always trying to lower our carbon footprint and with our new Kalmar Eco Reachstacker we will be first in the United Kingdom to use HVO100 and reduce the CO_2 emissions by up to 90%."

Stephen Newell, Operations Director
at Newell & Wright Group

When you combine the lower fuel consumption and use HVO as a fuel source, the CO_2 emissions from the Eco Reachstacker will be approximately 94% lower than that of older machines, making it the only diesel driven technology that can help ports meet the objective of halving their carbon emissions by 2030.

Eco Drive Modes

Choose between three different drive modes, each optimised to meet your operational requirements. The Eco reachstacker can be adapted to every task at hand, shifting many times during the day. The operator easily shifts between modes by using the cabin display screen.

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

Balances power and economy to optimise profitability and reduce fuel consumption by up to 10%.

Save up to 10%

Economy

For off-peak or night time operations when productivity is not essential or lower noiselevels are required. You can reduce fuel consumption by up to 20%.

Save up to 20%

Kalmar has a range of solutions that help make your operations safer, and more eco-efficient.

Enhanced driving experience

Increased safety and efficiency

The Kalmar Eco Reachstacker uses a continuous variable transmission which provides smoother transition in shifts, drive stops and direction changes. This allows the operator to drive more precisely, resulting in increased safety levels.

Easier to operate

Kalmar Eco Reachstackers are much easier to drive than other machines, as their smart programming does a lot of the work for you. Your drivers will no longer need to rev their engines to get the lifting and handling speeds they want, nor will they need to hold the brake pedal continually while lifting and lowering while stationary. This will dramatically reduce the strain and stress on their bodies.

Increased comfort

Kalmar Eco Reachstackers come fitted with our ergonomically designed EGO cabin. With slim line b-pillars, adjustable seating, steering wheel and control panel, your drivers will benefit from a superior operating environment and visibility. The Kalmar Eco Reachstacker, with its unique driveline, is quieter inside and outside the cabin, and vibrates less than traditional reachstackers, further enhancing driver comfort.

Kalmar Training

Driving a Kalmar Eco Reachstacker is different than traditional reachstackers and, to get the most out of it, Kalmar Training offers a range of courses for both your technicians and operators. Operators will be shown how to optimise their driving performance and what needs to be checked on the machine every day.

Technicians will be given the knowledge they need to be able to keep your new equipment in top condition. Courses are a mix of theory and hands on experience and can be held at Kalmar or at your site.

When you drive your Kalmar Eco Reachstacker correctly you will reduce fuel consumption and emissions by up to 40%

More choice

Handle bulk materials with ease

Our range of Eco Reachstackers can be fitted with a titling spreader that allows you to handle containerised bulk materials easily. With the ability to tilt lengthways or sideways up to 55 degrees and to shake the contents of 20, 30 or 40ft containers free, you will be able to handle bulk materials quickly and efficiently. Kalmar's tilting spreader is also able to open either the side door or the top hatch to ready the container for emptying. The Kalmar Eco Reachstacker can handle loads up to 32 tonnes in tilt mode and 45 tonnes in standard lifting mode when fitted with one of our special tilting spreaders.

Kalmar Load Measurement Solution

The Kalmar load measurement solution automatically weighs the load your equipment is handling. This information is registered so you can monitor and review each load, overloading or load distribution. The solution will save you time as the container is weighed while it is being moved and you can reduce paper work as this solution can automatically update other connected systems.

The Kalmar Load Measurement Solution records the Verified Gross Mass (VGM) of any load your equipment is handling, giving you the ability to monitor and review individual or batched loads and identify any overloading. This information is then available in several different ways, depending on your chosen solution: via your TOS, Kalmar Insight or as a stand-alone solution with printer. The accurate and reliable weighing of containers is an important part of safety at sea and is a mandatory requirement of the new SOLAS global weighing standards, from July 2016. The Kalmar load measurement solution is compliant with the SOLAS global standards.

More options

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.

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.

Reduced Steering Radius System. By reducing the overall steering radius of your reachstacker you will reduce wear and tear, extending the life of your tyres.

Drive Speed Limitation System. Automatically restricts the speed at which your equipment can be operated, helping to reduce wear and tear as well as fuel consumption.

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.

Options to make operating your equipment even safer and more eco-efficient.

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 Pvrotection 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 reward 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		○	

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

● Included ○ Optional

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.

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 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.

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 DRG 450SE-450SE (S = Container - Top Lift)
Kalmar DRG 450CE-450CE (C = Intermodal - Combi Lift)
Kalmar DRG 500AE-600AE (A = Industrial - Tool Carrier)
Kalmar DRG 570ZE-700ZE (Z = Industrial - Lift Hook)

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 (on both sides)
- Lifting eyes and anchor points (front & rear)
- Good rear end visibility of the truck
- Towing pin (rear)

Body
- Steps with anti-slip protection
- Anti slip protection on fenders and tanks
- Rear view mirrors (2x) - rear on front mudguards
- Strong and protective mudguards (front & rear)
- Basic noise insulation for the complete truck

Steer Axle (Rear)
- Kalmar steer axle mounted dual pivot bearings
- Orbitrol power steering with double acting cylinder
- Wheel nut protection on steer tyres

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 oil tank (140 lit), cooling & breather filter

Wheels (Tyres & Rims)
- Drive and steer tyres 18.00x25"/PR40 (6x)
- Drive and steer tyres 18.00x33"/PR36 (6x), for stronger models with higher lift capacity

Drivetrain
- Dana HVT-R2
- 6-cylinder diesel engines with pre-heater, displacement 7,70 Lit
- High power & torque with low fuel consumption
- Engine monitoring and protection system
- Automatic transmission Dana HVT-R2
- Hydrostatic slow-speed / mechanical high-speed
- Transmission monitoring and reverse protection
- Heavy-duty radiators for engine, transmission, brakes & hydraulics

Load-Sensing Hydraulics
- Load-sensing variable piston pumps
- Pumps for boom, spreader, brakes & steering
- Vane pumps for brake & oil cooling (2x)
- Return filters for the work hydraulics (2x/10 mµ)
- Hydraulic long-life fine filter with bypass (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°)
- Hydraulic tank (600 lit), cooling, breather filter & ORFS-couplings

Lifting Boom
- Strong, durable box-type boom with guide pads
- Boom with 2 lift cylinders & 1 extension cylinder

Attachment
- S = Top Lift, 45 tons, 20'-40', MPS, TWL + 4 lift hooks
- C = Combi Lift, 45 tons, 20'-30'-40', HPS, TWL, lift legs, 4 lift hooks, length tilt & tilt lock
- A = Tool Carrier, max 60 tons, MPS, TWL (2,5x0,76 m) & 4 lift eyes
- Z = Lift Hook, max 70 tons, dual hook, free rotation & 4 lift eyes
- S-C-A = 4 floating twistlocks, LED indication lamps & 4 LED work lamps
- S-C-A = Safety locking, alignment pins (4x) & sensors (4x)
- S-C-A = Rotation +195/-105 deg (2 motors & 2 brakes)
- S-C-A = Lift hooks for slings on end beams (4x)
- S-A = Mechanical Pile Slope MPS ±5 deg
- C = Hydraulic HPS ±5 deg
- Large sideshift (S-C = ±800 mm / A = ±450 mm)

Electrical System 24V
- Battery box 2x12V (24V) & main power switch
- Electric service box on chassis (LHS)
- 2 LED head lights on front fenders (one beam)
- 2 LED working lights on boom
- 2 LED working lights on front edge cabin
- 2 LED rear lights on fenders (when reversing)
- 2 LED working lights on attachment (S + C + A)
- 2 LED position lights on each side
- 2 LED tail lights / brake LED-lights
- 4 LED blinker lights (front-rear/left-right)
- 2 LED flashing brake lights (when reversing)
- 1 LED rotating warning beacon
- 1 acoustic signal / reverse alarm (in reverse)

Cabin (EGO)
Structure
- Spacious, modern cabin with good ergonomics
- Large windows, good visibility, in all directions
- Manual moveable cabin (stroke 2375 mm)
- Step for roof access
- Instep handle (left side)
- Sliding window on both sides
- Doors with air damper and key lock (L + R)
- Tinted laminated windows

Comfort
- Comfort seat Kalmar, mechanical 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

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 for driving
- Double brake pedals (L + R)
- Button for electronic hand brake (on/off)
- 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, powerful cooler, heater and ventilator
- Air-condition incl. fresh air and recirculation filter
- Wipers/washers; dual wipers on front window, single wipers on rear and roof windows
- Interval wiper functions on front, rear and roof

Information Systems
- Colour display & automatic fault analysis
- Menu control with toggle wheel & push buttons
- Electronic safety, overload, scale & synchronized lift functions
- Longitudinal Load Moment Indicator (Pop-Up Menu)
- Longitudinal Load Moment Control (Pop-Up Menu)

ECO Drive Modes (EDM)
- Power mode
- Normal mode (default)
- Eco mode

Eco Brake Modes (EBM):
- Soft; low engine brake (10kN)
- Medium; middle engine brake (40-50 kN)
- Dynamic; strong engine brake (80-100kN)

Operator menu:
- System voltage
- Engine rpm
- Travelling speed (km/h or mph)
- Hydraulic oil temperature
- Transmission oil temperature
- Engine oil pressure & coolant level
- Engine oil level
- Clock and date
- Load info (tonnes) & Load Centre info (mm)
- Boom extension & Boom angle
- Operating time (hours)
- Service time indicator (hours)
- Boom angle and Boom extension
- Electronic weight scale functions
- Status of Heating, Ventilation and AC system (HVAC)
- Fuel level (diesel and optional AdBlue)
- Estimated operating time before empty tank (hour/min)
- Service indicator
- Container counter with reset function
- Trip computer / statistics
- Container counter with reset function
- Trip computer / statistics

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:
- 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 & joystick stickers
- Fuse diagram
- Instruction manual
- Maintenance manual, digitally
- Spare parts catalogue, digitally

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 (digital)
- Spare parts catalogue (digital)

Warranty
Standard Warranty: 2 year / 4.000 hours

Options

Kalmar DRG 450SE-450SE (S = Container - Top Lift)
Kalmar DRG 450CE-450CE (C = Intermodal - Combi Lift)
Kalmar DRG 500AE-600AE (A = Industrial - Tool Carrier)
Kalmar DRG 570ZE-700ZE (Z = Industrial - Lift Hook)

Chassis
- DRG range in Toplift (S), Intermodal (C) and Industrial handlings (A + Z)
- Wheelbases in 6,0 - 7,5 m
- Duplex 2-stage booms for S+C+A+Z (H4 = 13,0-17,8 m)

Body
- External rear view mirrors (2x)
- Noise insulation kit for the entire truck
- Storage boxes (2x) left and right tank
- Mud flaps (front or/and rear)

Steer Axle (Rear)
- Steer cylinder space 14 mm (plus 0,50 m radius)

Wheels (Tyres & Rims)
- Spare wheel and rim 18.00x25"/PR40 (6x)
- Spare wheel and rim 18.00x33"/PR36 (6x), for stronger models with higher lift capacity

Drivetrain
- Dana HVT-R2
- Volvo - TAD-853-VE - 235 kW (EU Stage IIIA / EPA Tier 3)
- Volvo - TAD-883-VE - 235 kW (EU Stage V / EPA Tier 4f)

Attachment
- Tilt function ±2 deg (FWD/REV), incl tilt lock & speed limit 5 km/h
- Hydraulics Pile Slope HPS ±5 deg (side tilt), incl tilt lock & speed limit 5 km/h
- Rotations stop spreader at ±25 deg (incl override switch)
- Automatic extension 20'-40' incl 30' stop
- Barge: Overhigh Folding Legs (L=1.6/2.0 m)
- Boom nose extension L = 1000 or 1600 mm
- Barge: extended boom nose (L=1.0/1.6/2.0 m)
- 2 extra lift eyes, centre of spreader (2 x 22.5 T)
- 4 extra lift eyes, middle of spreader (4 x 11.2 T)
- Soft landing with ultrasonic sensor
- Twistlock rubber damper (100 mm longer)
- Extended twistlocks 300 mm
- Bulk handling spreader for 0-55 degrees sideways tilt (20'-40')
- Bulk handling spreader for 0-55 degrees lengthways tilt (20')

Electrical System 24V
- Radio with CD / MP3 / Bluetooth
- Extra sockets 2x24V+2x12V (in door columns)
- Extra sockets 2x24V+2x5V USB (door columns)
- Electric air pressure horn
- Height limitation system for lifting boom
- Load centre limitation for lifting boom
- Extra working light, LED 4x, on front mudguards
- Extra working light, LED 2x, on spreader
- Extra working light, LED 2x, middle of boom
- Extra working light, LED 4x, front of boom
- Extra reverse light, LED 2x, on rear light bracket
- Extra rotating beacon, LED, in boom nose front
- Extra rotating beacon, LED, right side on CW
- Flash light replacing STD beacon on boom
- Nato starter socket 24V (1x)
- Electric heated mirrors, front fender/standard position
- Electric heated and adjustable mirrors, on front fenders (standard position)
- Tyre pressure monitoring system (Bluetooth)
- Cabin heater incl 220V outlet
- Diesel powered cabin heater 5 kW
- Load centre limitation for lifting boom

Cabin
Structure
- Hydraulic sliding cabin (stroke 2375 mm), anti-collision function, avoid load hitting cabin
- Hydraulic elevating cab (stroke 2300 mm) position forward on right side
- Speed limitation depending on cabin position
- Extended rear cabin window 100mm

Comfort
- Seat with air-cushion, heating & 3-p belt
- Seat cover in vinyl
- Head rest for the seat
- Armrest with adjustment (LHS)
- Horizontal dampening/suspension of seat
- Grammer Actimo XL, air-cushion, heat, 3-p belt
- Isringhausen 6830KA/870, air-cush, heat, 3-p belt
- Extra trainer seat incl 2-p safety belt (LHS)
- Bracket for terminal and monitor (RHS)
- Write pad, A4 paper box & reading lamp (RHS)
- Extra rear-view mirror inside cabin

Controls
- Lever steering incl switch for forward/reverse
- Mini-wheel steering incl F-N-R switch
- Override key switch
- EGO joystick

Climate
- Sun visor front-roof-rear windows (of black net)
- Sun visor roof window (of reflecting film)
- Post-heating (break heater function)

Additional Equipment
- Fire extinguisher 6 kg, powder
- Tool kit
- Extra sound insulation - reduction 3 dB(A)
- Lockable fuel cap
- Central greasing (base truck + steering)
- Central greasing (entire spreader)
- Filter kit 2000 - 4000 hrs

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)

Information Systems
- VDI - Vehicle Data Interface

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

Fuel Saving Guarantee
- Kalmar Insight 3 year license
- Guaranteed level of fuel consumption
- Eco Reachstacker driver training
- Kalmar Speed Limitation System
- Automatic engine stop when idling

Kalmar Load Measurement System
- Semi-automatic weight checking and recording system including time, date and load
- SOLAS compliant (VGM - Verified Gross Mass)

Colour
- Other RAL colour than standard, chassis
- Special and multiple colours, chassis
- Other colour than standard, striping foil
- 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
- Eco Reachstacker driver training
- Contact Kalmar Training Centre for training

Warranty
- Additional warranty packages available:
  - Gold (complete forklift): max 5 yr/10.000h
  - Silver (drive line): max 8 yr/16.000h
  - Bronze (structural parts): max 10 yr/20.000h
- Contact Kalmar for more information

Specifications

					DRG450-60S5E	DRG450-60S5ME	DRG450-60S5XE	DRG450-65S5E	DRG450-65S5XE	DRG450-65S5XSE	DRG450-65S6E	DRG450-65S6XE	DRG450-65S6HE	DRG450-65S6HXE	DRG450-65S6HXSE
LIFT MODEL CAPACITY		Type of handling			Container handling			Container handling							
		Lift capacity, row 1-2-3-4	Q1 - Q2 - Q3- Q4	tons	45 - 27 - 13	45 - 30 - 15	45 - 35 - 18	45 - 32 - 16	45 - 38 - 21	45 - 38 - 21	45 - 32 - 16 - 9	45 - 38 - 21 - 12	45 - 33 - 18 - 10	45 - 39 - 21 - 13	45 - 39 - 21 - 13
		Lift capacity, row 1-2-3-4 (with jacks)	Q1 - Q2 - Q3- Q4	tons	-	-	-	-	-	45 - 41 - 29	-	-	-	-	45 - 41 - 29 - 18
		Load centre, from front face of tyres, row 1-2-3-4	L4 - L5 - L6 - L7	mm	1965 - 3815 - 6315			1965 - 3815 - 6315	1865 - 3815 - 6315	1865 - 3815 - 6315	2265 - 3815 - 6315	2165 - 3815 - 6315	2965 - 3815 - 6315 - 8815	2865 - 3815 - 6315 - 8815	2865 - 3815 - 6315 - 8815
		Stacking capacity, in container row 1-2-3-4 of 8'6" / 9'6"		mm	5/5 - 5/4 - 4/3	5/5 - 5/4 - 4/3	5/5 - 5/4 - 4/3	5/5 - 5/4 - 4/3	5/5 - 5/4 - 4/3	5/5 - 5/4 - 4/3	6/5 - 5/5 - 4/4 - 2/2	6/5 - 5/5 - 4/4 - 2/2	6/6 - 6/5 - 5/4 - 4/3	6/6 - 6/5 - 5/4 - 4/3	6/6 - 6/5 - 5/4 - 4/3
		Lost load centre, to front face of tyres	X	mm	835	835	935	835	935	935	835	935	835	935	935
		Wheelbase	L3	mm	6000	6000	6000	6500	6500	6500	6500	6500	6500	6500	6500
WEIGHTS		Service weight, standard truck		kg	67400	69400	77500	69500	76300	80300	70500	77500	73500	82500	83500
		Axle load, front at load centre L4, unloaded - loaded	(no jacks)	kg	34600 - 100600	34600 - 100600	35600 - 101600	35000 - 99400	35000 - 99400	38500 - 102900	36000 - 102500	36500 - 103000	39000 - 110300	41500 - 112800	42500 - 113800
		Axle load, front at load centre L5, unloaded - loaded	(no jacks)	kg	39000 - 86900	39000 - 92200	40200 - 102900	39000 - 93900	39200 - 105000	42800 - 108600	39500 - 94400	40200 - 105900	41000 - 97600	43800 - 111300	44800 - 112300
		Axle load, rear at load centre L4, unloaded - loaded		kg	32800 - 11800	34800 - 13800	41900 - 20900	34500 - 15100	41300 - 21900	41800 - 22400	34500 - 13000	41000 - 19500	34500 - 8200	41000 - 14700	41000 - 14700
		Axle load, rear at load centre L5, unloaded - loaded		kg	28400 - 7500	30400 - 7200	37300 - 9600	30500 - 7600	37100 - 9300	37500 - 9700	31000 - 8100	37300 - 9600	32500 - 8900	38700 - 10200	38700 - 10200
RACHSTACKER DIMENSIONS		Boom angle, min - max		deg	0 - 60	0 - 60	0 - 60	0 - 60	0 - 60	0 - 60	0 - 62	0 - 62	0 - 63	0 - 63	0 - 63
		Boom height, min - max	H3 - H5	mm	4600 - 18200	4600 - 18200	4700 - 18300	4600 - 18200	4700 - 18300	4700 - 18300	4500 - 19250	4600 - 19350	4700 - 20800	4700 - 20900	4700 - 20900
		Chassis height - top of boom fixation, max	H2	mm	3925	3925	4025	3925	4025	4025	3925	4025	3925	3925	3925
		Lift height, max	H4	mm	15100	15100	15200	15100	15200	15100	16200	16300	17700	17800	17800
		Boom reach stroke		mm	7000	7000	7000	7000	7000	7000	7700	7700	8500	8500	8500
		Truck height - seat height	H6 - H8	mm	4600 - 2575	4600 - 2575	4700 - 2675	4600 - 2575	4700 - 2675	4700 - 2675	4500 - 2575	4600 - 2675	4700 - 2575	4700 - 2675	4700 - 2675
		Overall truck length with boom	L	mm	11200	11200	11200	11700	11700	11700	12000	12000	12700	12700	12700
		Truck width over drive axle	B	mm	4150	4150	4150	4150	4150	4150	4150	4150	4150	4150	4150
		Spreader sideshift	V1	mm	+/-800 (1600)	+/-800 (1600)	+/-800 (1600)	+/-800 (1600)	+/-800 (1600)	+/-800 (1600)	+/-800 (1600)	+/-800 (1600)	+/-800 (1600)	+/-800 (1600)	+/-800 (1600)
		Spreader rotation		deg	+195/-105	+195/-105	+195/-105	+195/-105	+195/-105	+195/-105	+195/-105	+195/-105	+195/-105	+195/-105	+195/-105
		Ground clearance	min	mm	250	250	300	250	300	300	250	300	250	300	300
		Aisle width with 20'-40' container	A1 - A2	mm	11200 - 13600	11200 - 13600	11200 - 13600	11600 - 13600	11600 - 13600	11600 - 13600	11900 - 13900	11900 - 13900	12300 - 14150	12300 - 14150	12300 - 14150
		Turning radius, outer with 20'-40' container (at 90 degree turn)	R1 - R3	mm	8100 - 9400	8100 - 9400	8100 - 9400	8500 - 9400	8500 - 9400	8500 - 9400	8500 - 9450	8500 - 9450	8600 - 9450	8600 - 9450	8600 - 9450
		Turning radius, outer (at 90 degree turn)	R1 - R3	mm	-	-	-								
WHEELS	Wheels	Number of wheels, front – rear (x = driven)			4 – 2			4 – 2							
	Tires	Pneumatics, type / pressure (front - rear)		MPa	Diagonal / 1.0			Diagonal / 1.0							
		Dimensions, front – rear		tum	18.00×25"	18.00×25"	18.00×33"	18.00×25"	18.00×33"	18.00×33"	18.00×25"	18.00×33"	18.00×25"	18.00×33"	18.00×33"
	Rims	Dimensions, front – rear			13.00x25"/2.5	13.00x25"/2.5	13.00x33"/2.5	13.00x25"/2.5	13.00x33"/2.5	13.00x33"/2.5	13.00x25"/2.5	13.00x33"/2.5	13.00x25"/2.5	13.00x33"/2.5	13.00x33"/2.5
		Track width (front - rear)	S1 - S2	mm	3030 - 2600	3030 - 2600	3030 - 2800	3030 - 2600	3030 - 2800	3030 - 2800	3030 - 2600	3030 - 2800	3030 - 2600	3030 - 2800	3030 - 2800
AXLES	Steer axle	Manufacturer, type - designation			Kalmar steer axle / hydraulic power steering / double acting single cylinder			Kalmar steer axle / hydraulic power steering / double acting single cylinder							
	Drive axle	Manufacturer, type - designation			Kessler D102-PL341 / drive axle with differential and hub reduction			Kessler D102-PL341 / drive axle with differential and hub reduction							
	Service brakes	Type – affected wheels			Oil cooled wet disc brakes (WDB) / drive wheels			Oil cooled wet disc brakes (WDB) / drive wheels							
	Parking brake	Type – affected wheels			Single dry disc / spring activated - hydraulic release / drive 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			Load-sensing function / power-on-demand / variable piston pumps							
	Oil pressure	Max working pressure boom / spreader		MPa	23 / 16			23 / 16							
	Tank	Oil volume		Lit	740 (600 + 140)			740 (600 + 140)							
		Fuel tank, capacity		Lit	550			550							
		AdBlue tank, capacity		Lit	35			35							

Specifications

					DRG450-70S5XE	DRG450-70S5XS	DRG450-70S6HXS	DRG450-75S5XSE	DRG450-75S6HXSE	DRG450-60C5E	DRG450-655XE	DRG450-65C5E
	Type of handling				Container handling		Container handling			Intermodal handling / Tool Carrier		
LIFT MODEL CAPACITY	Lift capacity, row 1-2-3-4	Q1 - Q2 - Q3- Q4	tons		45 - 41 - 23	45 - 41 - 23	45 - 41 - 23 -14	45 - 45 - 26	45 - 45 - 27 - 17	45 - 25 - 10	45 - 32 - 15	45 - 28 - 13
	Lift capacity, row 1-2-3-4 (with jacks)	Q1 - Q2 - Q3- Q4	tons		-	45 - 41 - 31	45 - 41 - 31 -19	45 - 45 - 34	45 - 45 - 35 - 23	-	-	-
	Load centre, from front face of tyres, row 1-2-3-4	L4 - L5 - L6 - L7	mm		1865 - 3815 - 6315			1865 - 3815 - 6315		1965 - 3815 - 6315	1865 - 3815 - 6315	1965 - 3815 - 6315
	Stacking capacity, in container row 1-2-3-4 of 8'6" / 9'6"		mm		5/5 - 5/4 - 4/3	5/5 - 5/4 - 4/3	6/6 - 6/5 - 5/4 - 4/3	5/5 - 5/4 - 4/3	6/6 - 6/5 - 5/4 - 4/3	5/5 - 5/4 - 4/3	5/5 - 5/4 - 4/3	5/5 - 5/4 - 4/3
	Lost load centre, to front face of tyres	X	mm		935	935	935	935	935	835	935	835
	Wheelbase	L3	mm		7000	7000	7000	7500	7500	6000	6000	6500
WEIGHTS	Service weight, standard truck		kg		78800	80300	84400	82400	87200	73500	81800	74100
	Axle load, front at load centre L4, unloaded - loaded	(no jacks)	kg		37500 - 100500	39000 - 102000	42600-112000	40000 - 101800	43900 - 111700	41000 - 107000	42000 - 108000	41600 - 106000
	Axle load, front at load centre L5, unloaded - loaded	(no jacks)	kg		41500 - 110300	43000 - 111800	44700-113500	43800 - 117300	46000 - 119500	46700 - 91100	48000 - 105400	46900 - 94900
	Axle load, rear at load centre L4, unloaded - loaded		kg		41300 - 23300	41300 - 23300	41800-17400	42400 - 25600	43300 - 20500	32500 - 11500	39800 - 18800	32500 - 13100
	Axle load, rear at load centre L5, unloaded - loaded		kg		37300 - 9500	37300 - 9500	39700-11900	38600 - 10100	41200 - 12700	26800 - 7400	33800 - 8400	27200 - 7200
RACHSTACKER DIMENSIONS	Boom angle, min - max		deg		0 - 60	0 - 60	0 - 63	0 - 58	0 - 61	0 - 60	0 - 60	0 - 60
	Boom height, min - max	H3 - H5	mm		4700 - 18300	4700 - 18300	4700 - 20900	4750 - 18400	4750 - 21000	4600 - 18200	4600 - 18500	4600 - 18200
	Chassis height - top of boom fixation, max	H2	mm		4050	4050	4050	4025	4025	3925	4050	3925
	Lift height, max	H4	mm		15100	15100	17800	15200	17800	14900	15000	14900
	Boom reach stroke		mm		7000	7000	8500	7000	8500	7000	7000	7000
	Truck height - seat height	H6 - H8	mm		4700 - 2675	4700 - 2675	4700 - 2675	4750 - 2675	4750 - 2675	4600 - 2575	4600 - 2675	4600 - 2575
	Overall truck length with boom	L	mm		12200	12200	13200	12700	13700	11200	11200	11700
	Truck width over drive axle	B	mm		4150	4150	4150	4150	4150	4150	4150	4150
	Spreader sideshift	V1	mm		+/-800 (1600)	+/-800 (1600)	+/-800 (1600)	+/-800 (1600)	+/-800 (1600)	+/-800 (1600)	+/-800 (1600)	+/-800 (1600)
	Spreader rotation		deg		+195/-105	+195/-105	+195/-105	+195/-105	+195/-105	+195/-105	+195/-105	+195/-105
	Ground clearance	min	mm		300	300	300	300	300	250	300	250
	Aisle width with 20'-40' container	A1 - A2	mm		12100 - 13600	12100 - 13600	12800 - 14350	12500 - 13600	13100 - 14350	11200 - 13600	11200 - 13600	11600 - 13600
	Turning radius, outer with 20'-40' container (at 90 degree turn)	R1 - R3	mm		9000 - 9400	9000 - 9400	9000 - 9450	9400 - 11400	9400 - 9500	8000 - 9400	8100 - 9400	8500 - 9400
	Turning radius, outer (at 90 degree turn)	R1	mm		-	-	-	-	-	-	-	-
WHEELS	Wheels	Number of wheels, front – rear (x = driven)			4 – 2			4 – 2			4 – 2	
	Tires	Pneumatics, type / pressure (front - rear)		MPa	Diagonal / 1.0			Diagonal / 1.0			Diagonal / 1.0	
		Dimensions, front – rear		tum	18.00×33"			18.00×33"		18.00×25"	18.00×33"	18.00×25"
	Rims	Dimensions, front – rear			13.00x33"/2.5			13.00x33"/2.5		13.00x25"/2.5	13.00x33"/2.5	13.00x25"/2.5
		Track width (front - rear)	S1 - S2	mm	3030 - 2800			3030 - 2800		3030 - 2800	3030 - 2800	3030 - 2800
AXLES	Steer axle	Manufacturer, type - designation			Kalmar steer axle / hydraulic power steering / double acting single cylinder		Kalmar steer axle / hydraulic power steering / double acting single cylinder			Kalmar steer axle / hydraulic power steering / double acting single cylinder		
	Drive axle	Manufacturer, type - designation			Kessler D102-PL341 / drive axle with differential and hub reduction		Kessler D102-PL341 / drive axle with differential and hub reduction			Kessler D102/PL341 / drive axle with differential and hub reduction		
	Service brakes	Type – affected wheels			Oil cooled wet disc brakes (WDB) / drive wheels		Oil cooled wet disc brakes (WDB) / drive wheels			Oil cooled wet disc brakes (WDB) / drive wheels		
	Parking brake	Type – affected wheels			Single dry disc / spring activated - hydraulic release / drive wheels		Single dry disc / spring activated - hydraulic release / drive 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		Load-sensing function / power-on-demand / variable piston pumps			Load-sensing function / power-on-demand / variable piston pumps		
	Oil pressure	Max working pressure boom / spreader		MPa	23 / 16		23 / 16			23 / 16		
	Tank	Oil volume		Lit	740 (600 + 140)		740 (600 + 140)			740 (600 + 140)		
		Fuel tank, capacity		Lit	550		550			550		
		AdBlue tank, capacity		Lit	35		35			35		

Specifications

					DRG450-65C5XE	DRG450-65C5XSE	DRG450-70C5XE	DRG450-70C5XSE	DRG450-75C5XSE	DRG500-60A5E	DRG540-60A5XE	DRG540-65A5XE
	Type of handling				Intermodal handling		Intermodal handling			Industrial handling / Tool Carrier		
LIFT MODEL CAPACITY	Lift capacity, row 1-2-3-4	Q1 - Q2 - Q3- Q4	tons		45 - 34 - 17	45 - 34 - 17	45 - 38 - 20	45 - 38 - 20	45 - 43 - 24	50 - 27 - 16 - 11	54 - 33 - 20 - 14	54 - 38 - 25 - 17
	Lift capacity, row 1-2-3-4 (with jacks)	Q1 - Q2 - Q3- Q4	tons		-	45 - 38 - 24	-	45 - 38 - 27	45 - 45 - 32	-	-	-
	Load centre, from front face of tyres, row 1-2-3-4	L4 - L5 - L6 - L7	mm		1865 - 3815 - 6315			1865 - 3815 - 6315		2000 - 4000 - 6000 - 8000	2000 - 4000 - 6000 - 8000	
	Stacking capacity, in container row 1-2-3-4 of 8'6" / 9'6"		mm		5/5 - 5/4 - 4/3	5/5 - 5/4 - 4/3	5/5 - 5/4 - 4/3	5/5 - 5/4 - 4/3	5/5 - 5/4 - 4/3	-	-	-
	Lost load centre, to front face of tyres	X	mm		935	935	935	935	935	835	935	935
	Wheelbase	L3	mm		6500	6500	7000	7000	7500	6000	6000	6500
WEIGHTS	Service weight, standard truck		kg		81300	83500	83300	84800	88400	63000	74000	74000
	Axle load, front at load centre L4, unloaded - loaded	(no jacks)	kg		42400 - 106800	44500 - 108900	43500 - 106500	45000 - 108000	46000 - 107800	29500 - 102800	31000 - 110200	31000 - 108300
	Axle load, front at load centre L5, unloaded - loaded	(no jacks)	kg		48000 - 106800	50200 - 109000	48800 - 112600	50300 - 114100	51000 - 121200	-	-	-
	Axle load, rear at load centre L4, unloaded - loaded		kg		38900 - 19500	39000 - 19600	39800 - 21800	39800 - 21800	42400 - 25600	33500 - 10200	43000 - 17800	43000 -19700
	Axle load, rear at load centre L5, unloaded - loaded		kg		33300 - 8500	33300 - 8500	34500 - 8700	34500 - 8700	37400 - 10200	-	-	-
RACHSTACKER DIMENSIONS	Boom angle, min - max		deg		0 - 60	0 - 60	0 - 60	0 - 60	0 - 58	0 - 60	0 - 60	0 - 60
	Boom height, min - max	H3 - H5	mm		4700 - 18300	4700 - 18300	4700 - 18300	4700 - 18300	4750 - 18400	4600 - 18200	4700 - 18300	4700 - 18300
	Chassis height - top of boom fixation, max	H2	mm		3925	3925	4050	4050	4050	3925	4050	4050
	Lift height, max	H4	mm		15000	14900	14900	14900	15000	15150	15250	15250
	Boom reach stroke		mm		7000	7000	7000	7000	7000	7000	7000	7000
	Truck height - seat height	H6 - H8	mm		4700 - 2675	4700 - 2675	4700 - 2675	4700 - 2675	4750 - 2700	4600 - 2575	4700 - 2675	4700 - 2675
	Overall truck length with boom	L	mm		11700	11700	12200	12200	12700	10800	10800	11300
	Truck width over drive axle	B	mm		4150	4150	4150	4150	4150	4150	4150	4150
	Spreader sideshift	V1	mm		+/-800 (1600)	+/-800 (1600)	+/-800 (1600)	+/-800 (1600)	+/-800 (1600)	+/-450	+/-450	+/-450
	Spreader rotation		deg		+195/-105	+195/-105	+195/-105	+195/-105	+195/-105	+195/-105	+195/-105	+195/-105
	Ground clearance	min	mm		300	300	300	300	300	250	300	300
	Aisle width with 20'-40' container	A1 - A2	mm		11600 - 13600	11600 - 13600	12100 - 13600	12100 - 13600	12500 - 13600	-	-	-
	Turning radius, outer with 20'-40' container (at 90 degree turn)	R1 - R3	mm		8500 - 9400	8500 - 9400	9000 - 9400	9000 - 9400	9400 - 9400	-	-	-
	Turning radius, outer (at 90 degree turn)	R1	mm		-	-	-	-	-	8100	8100	8500
WHEELS	Wheels	Number of wheels, front – rear (x = driven)			4 – 2			4 – 2			4 – 2	
	Tires	Pneumatics, type / pressure (front - rear)		MPa	Diagonal / 1.0			Diagonal / 1.0			Diagonal / 1.0	
		Dimensions, front – rear		tum	18.00×33"			18.00×33"		18.00×25"	18.00×25"	18.00×33"
	Rims	Dimensions, front – rear			13.00x33"/2.5			13.00x33"/2.5		13.00x25"/2.5	13.00x33"/2.5	13.00x25"/2.5
		Track width (front - rear)	S1 - S2	mm	3030 - 2800			3030 - 2800		3030 - 2600	3030 - 2800	3030 - 2800
AXLES	Steer axle	Manufacturer, type - designation			Kalmar steer axle / hydraulic power steering / double acting single cylinder		Kalmar steer axle / hydraulic power steering / double acting single cylinder			Kalmar steer axle / hydraulic power steering / double acting single cylinder		
	Drive axle	Manufacturer, type - designation			Kessler D102-PL341 / drive axle with differential and hub reduction		Kessler D102-PL341 / drive axle with differential and hub reduction			KesslerD102-PL341 / drive axle with differential and hub reduction		
	Service brakes	Type – affected wheels			Oil cooled wet disc brakes (WDB) / drive wheels		Oil cooled wet disc brakes (WDB) / drive wheels			Oil cooled wet disc brakes (WDB) / drive wheels		
	Parking brake	Type – affected wheels			Single dry disc / spring activated - hydraulic release / drive wheels		Single dry disc / spring activated - hydraulic release / drive 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		Load-sensing function / power-on-demand / variable piston pumps			Load-sensing function / power-on-demand / variable piston pumps		
	Oil pressure	Max working pressure boom / spreader		MPa	23 / 16		23 / 16			23 / 16		
	Tank	Oil volume		Lit	740 (600 + 140)		740 (600 + 140)			740 (600 + 140)		
		Fuel tank, capacity		Lit	550		550			550		
		AdBlue tank, capacity		Lit	35		35			35		

Specifications

					DRG540-65A5XSE	DRG600-75A5XE	DRG600-75A5XSE	DRG570-65ZE	DRG600-65ZXE	DRG600-65ZXSE	DRG700-75ZXE	DRG700-75ZXSE
LIFT MODEL CAPACITY		Type of handling			Industrial handling / Tool Carrier			Industrial handling / Lift Hook				
		Lift capacity, row 1-2-3-4	Q1 - Q2 - Q3- Q4	tons	54 - 38 - 25 - 17	60 - 45 - 29 - 21	60 - 45 - 29 - 21	57-54-31-19-14	60-60-38- 25-18	60-60-38- 25-18	70-60-45-30-22	70-60-45-30-22
		Lift capacity, row 1-2-3-4 (with jacks)	Q1 - Q2 - Q3- Q4	tons	-		60 - 50 - 38 - 27	-		60-60-45-34-24		70-60-45-39 -28
		Load centre, from front face of tyres, row 1-2-3-4	L4 - L5 - L6 - L7	mm	1865 - 4000 - 6000 - 8000 - 10000			1500 -2000 - 4000 - 6000 - 8000				
		Stacking capacity, in container row 1-2-3-4 of 8'6" / 9'6"		mm	-	-	-	-	-	-	-	-
		Lost load centre, to front face of tyres	X	mm	935	935	935	835	935	935	935	935
		Wheelbase	L3	mm	6500	7500	7500	6500	6500	6500	7500	7500
WEIGHTS		Service weight, standard truck		kg	76200	77000	78000	61100	70900	72100	74000	75000
		Axle load, front at load centre L4, unloaded - loaded	(no jacks)	kg	33200 - 110500	34200 - 118700	35000 - 117400	26000 - 103500	27300 - 114600	28300 - 115600	30600-123300	31600-124300
		Axle load, front at load centre L5, unloaded - loaded	(no jacks)	kg	-	-	-	-	-	-	-	-
		Axle load, rear at load centre L4, unloaded - loaded		kg	43000 - 19700	42800-19300	43000 - 20600	35100 - 14600	43600 - 16300	43600 - 16300	43400-20700	43400-20700
		Axle load, rear at load centre L5, unloaded - loaded		kg	-	-	-	-	-	-	-	-
RACHSTACKER DIMENSIONS		Boom angle, min - max		deg	0 - 60	0 - 48	0 - 48	0 - 60	0 - 60	0 - 60	0 - 58	0 - 58
		Boom height, min - max	H3 - H5	mm	4700 - 18300	4750 - 18400	4750 - 18400	4600 - 18200	4700 - 18300	4700 - 18300	4750 - 18400	4750 - 18400
		Chassis height - top of boom fixation, max	H2	mm	4025	4025	4025	3925	4050	4050	4050	4050
		Lift height, max	H4	mm	15250	15250	15250	15200	15200	15200	15300	15300
		Boom reach stroke		mm	7000	7000	7000	7000	7000	7000	7000	7000
		Truck height - seat height	H6 - H8	mm	4700 - 2675	2675	2675	4600 - 2575	4700 - 2675	4700 - 2675	4750 - 2675	4750 - 2675
		Overall truck length with boom	L	mm	11300	12300	12300	10900	10900	10900	11900	11900
		Truck width over drive axle	B	mm	4150	4150	4150	4150	4150	4150	4150	4150
		Spreader sideshift	V1	mm	+/-450	+/-450	+/-450	-	-	-	-	-
		Spreader rotation		deg	+195/-105	+195/-105	+195/-105	360 / 360[1]	360 / 360[1]	360 / 360[1]	360 / 360[1]	360 / 360[1]
		Ground clearance	min	mm	300	300	300	250	300	300	300	300
		Aisle width with 20'-40' container	A1 - A2	mm	-	-	-	-	-	-	-	-
		Turning radius, outer with 20'-40' container (at 90 degree turn)	R1 - R3	mm	-	-	-	-	-	-	-	-
		Turning radius, outer (at 90 degree turn)	R1 - R3	mm	8500	9400	9400	9400	12450	12450	9400	9400
WHEELS	Wheels	Number of wheels, front – rear (x = driven)			4 – 2			4 – 2				
	Tires	Pneumatics, type / pressure (front - rear)		MPa	Diagonal / 1.0			Diagonal / 1.0				
		Dimensions, front – rear		tum	18.00×33"			18.00×25"	18.00×33"	18.00×33"	18.00×33"	18.00×33"
	Rims	Dimensions, front – rear			13.00x33"/2.5			13.00x25"/2.5	13.00x33"/2.5	13.00x33"/2.5	13.00x33"/2.5	13.00x33"/2.5
		Track width (front - rear)	S1 - S2	mm	3030 - 2800			3030 - 2600	3030 - 2800	3030 - 2800	3030 - 2800	3030 - 2800
AXLES	Steer axle	Manufacturer, type - designation			Kalmar steer axle / hydraulic power steering / double acting single cylinder			Kalmar steer axle / hydraulic power steering / double acting single cylinder				
	Drive axle	Manufacturer, type - designation			Kessler D102-PL341 / drive axle with differential and hub reduction			Kessler D102-PL341 / drive axle with differential and hub reduction				
	Service brakes	Type – affected wheels			Oil cooled wet disc brakes (WDB) / drive wheels			Oil cooled wet disc brakes (WDB) / drive wheels				
	Parking brake	Type – affected wheels			Single dry disc / spring activated - hydraulic release / drive 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			Load-sensing function / power-on-demand / variable piston pumps				
	Oil pressure	Max working pressure boom / spreader		MPa	23 / 16			23 / 16				
	Tank	Oil volume		Lit	740 (600 + 140)			740 (600 + 140)				
		Fuel tank, capacity		Lit	550			550				
		AdBlue tank, capacity		Lit	35			35				

Notes:
1. 360 / 360 (endless) for lifting hook

Drivetrain

	Drivetrain		Volvo - TAD-853-VE	Volvo - TAD-883-VE
ENGINE	Drive motor, manufacturer - type designation		Volvo - TAD-853-VE	Volvo - TAD-883-VE
	Fuel types, motor type[1]		Diesel / HVO / 4-stroke	Diesel / HVO / 4-stroke
	Turbo charger / cooling		Turbo (FGT) / Intercooler	Turbo (FGT) + EPG / Intercooler
	Engine after treatment type		No AdBlue, DOC, DPF or SCR	AdBlue, DOC, DPF and SCR
	Diesel particle filter (DPF)		No	Yes
	Rated power / at revs (ISO 3046)	kW / rpm	235 / 1750	
	Peak power / at revs (ISO 3046)	kW / rpm	-	-
	"Peak torque / at revs (ISO 3046)	Nm / rpm	1300 / 1400	1300 / 1400
	Number of cylinders / displacement	lit (in2)	6 / 7.7 (470)	6 / 7.7 (470)
	Fuel consumption, normal driving	l/h	10 - 15	10 - 15
	Emission standard		EU Stage IIIA / EPA Tier 3	EU Stage V / EPA Tier 4f
			3 - 7	3 - 7
GEARBOX & MISC	Manufacturer's type designation		Dana HVT-R2	
	Clutch, type		Hydrostatic	
	Gearbox, type		Hydro-mechanical Variable Transmission (Power-split)	
	Numbers of gears, forward / reverse		3 - 2	
	Alternator, type / power	W	AC - 3640 (28 / 130)	
	Starting battery, voltage / capacity	V / Ah	2×12 / 145	
	Driving axle, manufacturer / type		Kessler - D102PL341/528-NLB	

Performance

	Models			Eco Reachstacker
MODELS	Wheelbase			6000 - 7500
SPEEDS	Travel speed, forward - reverse	Unloaded / at rated load	km/h	28 - 22 / 18 - 18
	Lifting speed	Unloaded / At 70 % of rated load	m/s	0.42 / 0.25
	Lowering speed	Unloaded / At rated load	m/s	0.36 / 0.36
POWER	Gradeability, max	Unloaded	%	38
		At rated load	%	21
	Gradeability, at 2 km/h	Unloaded	%	30
		At rated load	%	17
	Drawbar pull		kN	257
SOUND	Noise level inside cabin (with EDM*)	EN12053, LpAZ	dB(A)	68 - 70
	Noise level outside cabin (with EDM*)	EN12053, LWAZ	dB(A)	103 - 106
	Noise level outside cabin (with EDM*)	2000/14/EC, LWAZ	dB(A)	106 - 109

Notes*:
1. With Eco Drive Mode (EDM) drivetrain settings included. Eco, Normal and Power (various rpms).

Attachments

There are a range of attachments that can be fitted onto your reachstacker, which one depends of your handling needs.

Container Handling:
toplift (twistlocks) and slings (lift hooks).

Intermodal Handling:
toplift (twistlocks), trailer lift (lift legs) and slings (lift hooks).

Industrial Handling:
sub attachments (twistlocks) and slings (lift hooks).

Industrial Handling:
slings heavy lift (lift hook / rotation) and slings heavy lift (lift eyes / fixed).

Container Handling:
toplift (twistlocks) and slings (lift hooks) with 55-deg Breakbulk Tilt.

Industrial Handling:
Coil Hook.

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