

The Kalmar

GLORIA

range of reachstackers



DRG420-1300



MEET GLORIA

Our Gloria range of reachstackers is our most comprehensive to date and is available with a broad range of lifting capacities and attachments which can be fitted to suit your specific requirements. From moving fully laden containers to shifting 286,000 lbs wind generator segments, all can be accomplished safely, effectively, and efficiently - just as you would expect from a Kalmar Reachstacker.

What can you expect from Gloria?



Continuously improved performance and availability levels.



An ergonomically designed cabin that's more comfortable and safer for your operators.



A range of reachstackers and options that can help reduce your carbon emissions.



A more connected experience and a range of digital support services.

Kalmar, the home of the reachstacker.

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

Now, with over 11,000 reachstackers operating in over 160 countries, we are known for designing and building reachstackers that are safe, reliable, highly efficient; and can stack higher and deeper than other machines. All while continually adapting and innovating to meet the changing needs of both material and container handlers around the globe.

With our range of Gloria Reachstackers, decades of innovative thinking and clever design is once again paying off for our customers, as this generation of reachstackers delivers a leap forward in productivity, ergonomics, and operational efficiency. Now you just need to work out which of our reachstackers is most suited to your operational needs. We are here to help.



Optimizing UPTIME

With our latest generation of reachstackers, we've managed to boost performance once again with newly designed integrated components and improved operator interfaces. The result? Simplified maintenance, fewer faults, and a major increase in service intervals.

Improved component integration.

Kalmar's G-Generation reachstackers have taken a big leap forward in component integration and construction. For example, our new segmented wiring makes maintenance and replacement simpler and quicker. And with fewer exposed components there is less wear on wiring, hydraulics, and other connectors, improving the reliability and availability of your Kalmar Reachstacker.

Proactive monitoring.

Kalmar was one of the world's first manufacturers to use Can-bus technology as a standard, as it automatically locates failures, compensating with backup bus wires and connectors before the fault can affect your machine. Since an individual electrical component and its backup very rarely fail together, the result is a highly reliable self-correcting pro-active system.

Easier to service.

With all major service points accessible from the ground and an engine bay with removable top covers, you'll find it quicker and safer to perform routine checks and maintenance tasks on G-Generation reachstackers.

Longer service periods.

Our G-Generation reachstackers have longer service intervals than previous generations, elevating uptime and reducing costs.





SAFER

and more comfortable

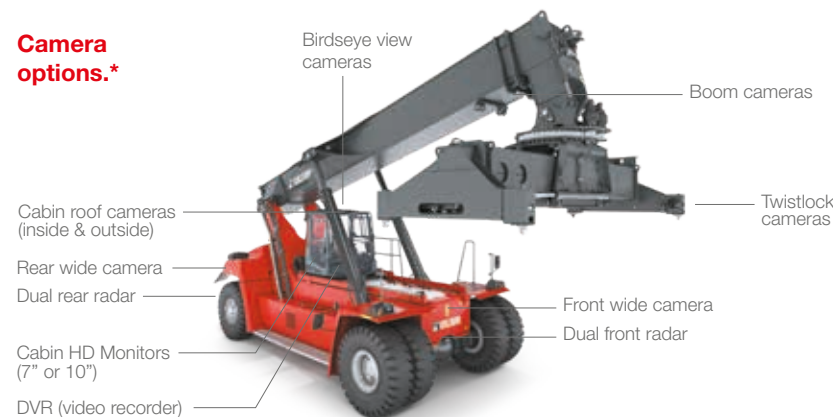
Keeping your drivers safe and comfortable is not only good for your drivers, it's also good for business. Which is why each of our G-Generation reachstackers is fitted with our ergonomically designed EGO cabin, giving your drivers a safer and more comfortable work environment. Here are some of the key elements designed to improve safety and comfort.



Improved visibility.

An open cabin provides for optimized visibility at all angles. Smart profiles and curved windows combine to give exceptionally strong forward, diagonal, and rearward visibility. A range of optional cameras are available that can be mounted in different positions on your reachstacker to improve the operator's visibility of their operating environment.

Camera options.*



* Our range of camera solutions is currently being rolled out, check with your local Kalmar support team to check what is available for your equipment in your region.

G-Generation joystick.

The G-Generation joystick with built-in travel direction switch is designed to improve driving efficiency. It is ergonomically enhanced to reduce arm fatigue. There are also other optional joysticks available if required.

Adjustable multi-seat.

Fully integrated Kalmar seats have been carefully developed to ensure the best possible comfort and sitting posture for long shifts and demanding operations for your drivers. There are five seat options to choose from so you will be sure to find one that suits your drivers' needs.

High-capacity wipers.

With over 90% curved windscreen drying surface, these wipers provide optimal visibility for higher productivity and safety when operating in the rain.

Comfort pedals.

A flexible pedal system with adjustable pedal angles is fitted as standard to minimize foot strain. It's a floor-based solution with a hanging pedal feel, so your drivers can drive a full shift and experience less foot and leg fatigue.

Climate package.

An electronic climate control system is fitted as standard to keep your operators as comfortable as possible in most conditions. Large air intakes mean easy filter replacement in the front, whilst a well-designed climate control system provides superior interior comfort.

Ergonomic steering wheel.

Our patented steering wheel has been specially engineered to reduce stress and increase productivity through careful testing. It is fully adjustable and can also be tilted at an angle to the side for comfortable maneuvering in any situation.

Work console.

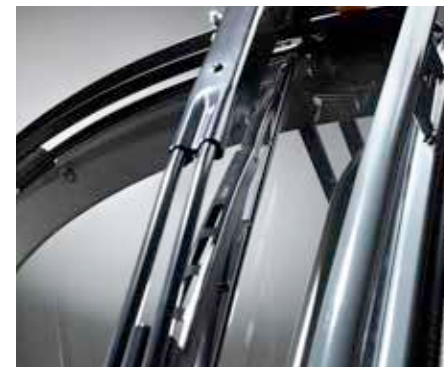
Your operator will find all the key controls, switches, and indicators within easy reach in our ergonomically designed cabin. Work consoles are also adjustable as we know that no two drivers are the same.

Intuitive interfaces.

Kalmar's color display user interface [HMI] used across the range has been intuitively designed for ease of use, with information displayed clearly and logically to ensure that your drivers are kept fully informed.

Enhanced safety.

To further enhance safety, your reachstacker can be fitted with cameras to see what is going on behind, additional lights for operating in limited light or at night, a fire suppression system in case of fire on board, and an alco-lock to make sure your drivers are always in complete control of their machine.



Meet Gloria's

FAMILY

The reliability, robustness and success of Gloria's platform has allowed us to extend our initial offering to meet a variety of material handling needs. Initially designed as a top loader, Gloria now comes in models that have been specifically designed for industrial, intermodal and barge handling applications. Gloria's family has been further expanded with the addition of the Kalmar Eco Reachstacker and the Kalmar Electric Reachstacker.

Reachstacker
Product
Portfolio



Gloria Range*	DRG450S	DRG450S	DRG450C	DRG570-1300Z	DRG500-850A
Eco Range	DRG450SE	DRG450SE	DRG450CE	DRG570-700ZE	DRG500-600AE
Electric Range	ERG450S	ERG450S**	ERG450C		

* Including Super Gloria. See separate brochure for Lift Hook and Tool Carrier model and features.
** Available in 2023



The Kalmar Eco Reachstacker.

In comparison to older machines, Kalmar's Eco Reachstacker can reduce your fuel consumption by up to 40%, and by up to 25% when compared to more recent machines, cutting your fuel costs and emissions while matching the productivity levels of machines with much larger engines.



The Kalmar Electric Reachstacker.

Kalmar's electrically powered range of reachstackers produce zero emissions at source helping to improve the eco-efficiency of your operations while maintaining the highest levels of productivity and safety. With a choice of lifting capacities, attachments, modular battery options and charging solutions, we can work with you to design a solution that will deliver for your business.



CUT COSTS

and lower carbon emissions

Whether you're striving to save on fuel or meet ever tougher emissions standards, your objectives are the same: to reduce costs and lower your carbon emissions. Thanks to our range of smart functions and driver training programs, operators get all the assistance they need to minimize fuel costs while becoming more eco-efficient.

Use up to 20% less fuel.

Kalmar Eco Drive Modes can cut your fuel costs and emission by up to 20%. Kalmar's Eco Drive Mode solution has three different driving modes, each tailored to meet the needs of your business:

Power Mode:	for maximum performance.	
Normal Mode:	reduces fuel costs and emission by up to 10%.	Save up to 10%
Economy mode:	maximizes your savings with up to a 20% reduction in fuel consumption and carbon emissions.	Save up to 20%

Cut carbon emissions by up to 90%.

HVO100 fuel is a fossil free diesel substitute made from vegetable oil that can be used across the range, cutting carbon emissions by up to 90%. HVO100 is produced by using sustainably sourced vegetable and animal matter to ensure its production does not have any negative impact on the environment and has a chemical structure like diesel fuel, allowing it to be substituted for diesel without any impact on the efficiency of your equipment. HVO100 that meets the EN15940 standard is seen as the best and easiest paraffinic option available to help reduce your carbon emissions immediately.



Options to cut fuel costs.

There are many small optional things you can do to reduce your fuel consumption and emissions even further.



Start/stop function.

This option can 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.



Automatic engine shutdown.

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



Tire pressure monitoring.

This option provides an integrated tire pressure monitoring system that gives your driver constant updates on the pressure of each individually monitored tire. It's an effective way to help prevent blowouts and maintain the optimal tire pressure, further reducing your fuel consumption and emissions by up to 10%.



More OPTIONS



BE SAFE

Kalmar solutions that help 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 utilizes multiple spray nozzles that release a high pressure fire suppression agent where the fire has been detected from a re-chargeable 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 breathalyzer.



Reverse Alarm System. When your staff are working side by side with moving vehicles there is always a safety risk. Installing a reverse alarm 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.



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



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



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.



EFFICIENCY IN ACTION

Kalmar solutions that help make your equipment more eco-efficient and sustainable:



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



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.



Kalmar solutions that help make your equipment more productive:



ECO Drive Mode settings. Three drive mode settings will allow you to adapt equipment performance to the required productivity levels at any time. This will ensure maximum performance when needed and reduced fuel consumption and wear and tear at low productivity times.



Kalmar Insight. Complete overview and management of your fleet and individual equipment performance will allow you to optimize both overall performance and individual equipment and driver performance to ensure high and efficient productivity levels.

Kalmar Tracker.

Kalmar Tracker automates and manages the flow of containers efficiently and safely through your yard or terminal, is available for our entire range of G-Generation reachstackers and can be retrofitted on most existing Kalmar machines. Helping to streamline and automate your business processes - saving you time and money.



Container Weighing and Load Centricity. A solution that automatically weighs and records the container load your machine is handling***.



Container ID Recognition. Automatic capture and registration of the container ID allows your drivers to focus on safe and productive container handling.



Container Locator. Ensures you always know where each individual container is in your yard, at any given time.**

** This option will be available soon.
*** Weight scale is not legal-for-trade in USA/CAN.

MOVE

whatever you need

Based on your specific needs, the G-Generation reachstacker is available with a complete range of standard and customized features and attachments making it suitable for many different applications.

Guaranteed to deliver.

With a choice of:

- wheelbases from 236" up to 364"
- lifting capacities from 92,000 to 286,000 lbs
- powerful and fuel efficient drivelines combinations to choose from
- attachments which include hooks, magnets, coil rams and a tool carrier which can have a variety of tools fitted.

The G-Generation reachstacker is available for container, intermodal, barge and industrial handling. Whatever your application, our aim is to help adapt your reachstacker for the best possible lifetime utilization.

Container Handling



Industrial Handling



Bulk Handling



Intermodal Handling



Trimodal/Barge Handling



When you need to handle really heavy loads.

Kalmar's Super Gloria Reachstacker has a top lifting capacity of 286,000 lbs up to 512" high. Initially developed for the wind industry to move wind turbine - lifting hubs, blades, towers and nacelles, which are large, heavy and bulky - Super Gloria has proven that it can handle the heaviest of loads efficiently and safely for any application.



Kalmar Super Gloria lifting spools of steel drill pipe weighing over 165,000 lbs for an oil company in Houston.

SUPPORT

when and where you need it

Our job doesn't stop once we deliver your new reachstacker. Our dealer network offers a range of support services that will help keep your new equipment running at its optimal best, including services and maintenance packages, Kalmar Genuine Spare Parts, Kalmar Insight a performance management tool for your fleet, and a range of financing options. To find what would work best for your operations, speak to your local dealer who will be happy to tailor a service and support package to meet your specific needs.

Support through our extensive network of Kalmar Authorized Dealers.



Financing options.

You may choose to buy your new reachstacker outright or consider leasing or renting your equipment. Your local Kalmar Authorized Dealer offers a range of leasing and renting options that can give you the financial predictability you need, and the option to upgrade your equipment after a fixed period. By renting or leasing your equipment you can focus on your core operations, while your local dealer could provide all your service and maintenance needs required for your equipment.

You just need to choose which leasing package and level of service and maintenance support is right for your business. No matter what your service and support needs are, make sure that you speak to your local Kalmar Authorized Dealer first.



When the right part matters.

When something needs to be replaced and you need a spare part that meets your exact needs – urgently – you can't do better than a Kalmar Genuine Part. Only Kalmar Genuine Parts are guaranteed to fit perfectly and keep your equipment running optimally.

Kalmar together with your local dealer carries a large range of essential spare parts and service kits at all times, all other parts can be ordered by your dealer through one of our global parts warehouses which are located around the world, ensuring that we can get the right part quickly and efficiently - minimizing your equipment downtime and maximizing productivity.



Kalmar Insight. Turning data into actionable, impactful insights.

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. This information is then delivered through an accessible user interface that is available on cell phones, tablets or on office-based screens.

You can review your entire fleet's performance, schedule maintenance activities, and review operational data for each piece of equipment. All enabling you to act on real-time information that will help improve your overall operations immediately. Kalmar Insight is available as an option on all new Kalmar equipment and can be retrofitted into existing Kalmar equipment or those built by other manufacturers.

*Installation costs and/or an annual subscription fee may apply – speak to your local dealer.

STANDARD

Kalmar DRG 420S-450S (S = Top Lift)
Kalmar DRG 450C-450C (C = Combi Lift)
Kalmar DRG 500A-650A (A = Tool Carrier)
Kalmar DRG 570Z-1300Z (Z = Lift Hook)

Norms, Standards and Regulations

- Machinery Directive 2006/42/EC
- Safety Variable Reach Trucks EN 1459+A3
- Safety Low & High Lift Trucks ANSI/ B56.1
- Stability Variable Reach Trucks EN 1459+A3
- ANSI/ITSDF-marking for North America trucks

Chassis

- Strong and durable heavy-duty chassis
- Safe access steps, platform & hand rails, left side
- Long bottom access step (on both sides)
- Lifting eyes and anchor points (front & rear)
- Good rear end visibility of the truck
- Tow pin (rear)

Body

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

Steer Axle (Rear)

- Kalmar steer axle mounted dual pivot bearings
- Orbitrol power steering with double acting cylinder
- Wheel nut protection on steer tires

Drive Axle (Front)

- Kessler planetary axle with differential drive
- Wide axle for high side stability (163")
- Oil-cooled Wet Disc Brakes (WDB)
- High pressure filter (10 mμ) for the brakes
- Brake oil tank (37 gal), cooling & breather filter

Wheels (Tires & Rims)

- Strong wheels (tires and rims) in 18.00x25", 18.00x33", 21.00x35" and 24.00x35" (6x)

Drivetrain

- Volvo D11, EU Stage 3/4/5 (EPA Tier 3 & 4F)
- Cummins QSM-11, EU Stage 3 (EPA Tier 3)
- 6-cylinder diesel engines with pre-heater
- High power & torque with low fuel consumption
- Engine monitoring and protection systems
- Automatic ZF transmissions 5WG-261/5WG-311 or Dana TE-30
- Precise, soft and efficient shifting of both gears and directions with 5 fwd + 3 rev gears
- 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 (158 gal), cooling, breather filter & ORFS-couplings

Lifting Boom

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

Attachment

- Top Lift (S), 99,000 lbs, 20-40', MPS, TWL, 4 lift hooks, sideshift and rotation
- Combi Lift (C), 99,000 lbs, 20-30-40', HPS, TWL, 4 lift legs, 4 hooks, end tilt+lock, sideshift & rotation
- Tool Carrier (A), max 143,000 lbs, MPS, TWL (2,50 x 0,76 m), 4 lift eyes, sideshift and rotation
- Lift Hook (Z), max 286,000 lbs, dual hook, free pivot, free rotation and 4 lift eyes (no rotation)
- S-C-A = 4 floating twistlocks, LED indication lamps and 2 LED work lamps
- S-C-A = Safety locking, alignment pins (4x) and sensors (4x)
- S-C-A = Rotation +195/-105 deg (2 motors and 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 = ±31.5" / A = ±17.7")

Electrical System 24V

- Battery box 2x12V (24V) & main power switch
- Electric service box on chassis, left side
- 2 LED head lights on front fenders
- 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 turn signal 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 93")
- Hand rail (left side)
- Sliding window on both sides
- Doors with air damper and key lock (left & right)
- Tinted laminated windows

Comfort

- Kalmar comfort seat, mechanical spring, high back
- Adjustable armrest (right side) & 2-point safety belt
- Inside rear view mirror (right side)
- Interior lights
- Fully adjustable steering wheel with tilt function
- Fully adjustable color display
- Electric adjustable operational console with joystick, operational buttons & armrest (right side)
- Power steering wheel with steer knob
- Electric horn
- LED background light for buttons & switches

Controls

- Joystick for boom, spreader & forward / reverse
- Auto rev-up engine RPM at lifting/extension
- Electric accelerator for driving
- Double brake pedals (left & right)
- Button for electronic hand brake (on/off)
- Safety override for hydraulic functions (by code)
- Multi-function lever (left side) horn, gear/direction switch, high/low beam
- Warning - parking brake (on/off) leaving seat
- Hour meter

Climate

- ECC, electronic climate control, powerful cooler, heater and ventilator
- Air-condition with fresh air and recirculation filter
- Wipers/washers; dual wipers on front window, single wipers on rear and roof windows
- Intermittent wiper functions on front, rear and roof

Information Systems

- Color display & automatic fault analysis
- Menu control with scroll 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

- Power mode
- Normal mode
- Eco mode

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 (lbs) & load center info (inch)
- 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 DEF)
- Estimated operating time before empty tank (hour/min)
- Service indicator
- Container counter with reset function
- Trip computer / statistics

Various warning lights & signals:

- Charging battery
- Low brake pressure
- Fault 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

Color

- Cabin: Iron-Grey RAL 7011
- Chassis, tanks & fenders: 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 with load chart
- Warning, tire pressure & oil pressure labels
- Information & joystick labels
- Fuse diagram
- Instruction manual
- Maintenance manual
- Spare parts catalog

Warranty

- 24 months / 4000 hours

OPTIONS

Kalmar DRG 420S-450S (S = Top Lift)
Kalmar DRG 450C-450C (C = Combi Lift)
Kalmar DRG 500A-650A (A = Tool Carrier)
Kalmar DRG 570Z-1300Z (Z = Lift Hook)

Chassis

- DRG ranges in Toplift (S), Intermodal (C), Tool Carrier (A) and Lift Hook (Z)
- Wheelbases; 236" - 295" (Gloria range)
- Wheelbases; 325" - 364" (Super Gloria range)

Body

- Anti slip protection on fenders and tanks
- External rear view mirrors (2x)
- Noise insulation kit for the entire truck
- Storage boxes (2x) left and right tank

Steer Axle (Rear)

- Steer cylinder spacer (less tire wear)

Wheels (Tires & Rims)

- Spare wheels, tires and rims for 18.00x25", 18.00x33", 21.00x35" and 24.00x35"

Drivetrain

- ZF 5WG-261 (lock-up)*
- Volvo TAD-1171-VE (355 hp, Tier 4F)
- Dana TE-30 (no lock-up)
- Volvo TAD-1151-VE (355 hp, Tier 3)
- Volvo TAD-1181-VE (355 hp, EU5/Tier 4F(dual cert))
- Dana TE-30 (no lock-up)
- Volvo TAD-1152-VE (382 hp, Tier 3)
- Volvo TAD-1172-VE (382 hp, Tier 4F)
- Volvo TAD-1182-VE (382 hp, EU5/Tier 4F(dual cert))

Load-Sensing Hydraulics

- High pressure filter

Lifting boom

- Duplex 2-stage S5 (5/5, H4 = 595" - 599")
- Duplex 2-stage S6 (6/5, H4 = 634" - 638")
- Duplex 2-stage S6H (6/6, H4 = 697" - 701")
- Duplex 2-stage C5 (5/5, H4 = 587" - 591")
- Duplex 2-stage A5 (5/5, H4 = 591" - 595")
- Duplex 2-stage Z (-/-, H4 = 512")
- Lifting boom outreach cylinder stroke, S5=276", S6=303", and S6H=335"

Attachment

- Tilt function F/R ±5 deg, tilt lock, speed 3mph
- Hydraulics Pile Slope, HPS ±5 deg (side tilt), with tilt lock and speed 3mph
- Rotation stop at ±25 deg (with override switch)
- Automatic extension 20'-40' with 30' stop
- Barge: Overheight Folding Legs (L= 63"/79")
- Barge: extended boom nose (L= 39"/63"/79")
- 2 extra lift eyes, center of spreader (2 x 49,500 lbs)
- 4 extra lift eyes, middle of spreader (4 x 24,500 lbs)
- Soft landing with ultrasonic sensor (less noise)
- Twistlock rubber damper (3.9" longer)
- Extended twistlocks 11.8" (9.8" longer)
- Cylinder extension 20'-40' on standard/Tilt/HPS
- WTP Top Lift (Wide TTwistlock Position), HPS ±5 deg, 30'-35' stop, TWL = 89"-96" mm
- Big Tilt 0-55 deg, 99,000 / 70,500 lbs, sideways
- Big Tilt 0-55 deg, 99,000 / 70,500 lbs, lengthways
- Big Tilt with hydraulic door opener
- Coil ram, 77,000 lbs, coil ID/OD = 20"/118", slave attachment for 20ft or Tool Carrier
- Lift hook (1x) + lift eyes (4x), max 110,000 lbs, slave attachment for 20ft or Tool Carrier
- Various industrial lift units, mounted in slave attachments for 20ft or Tool Carrier

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 center limitation for lifting boom
- Speed limitation, please specify mph
- Various speed limitations (with/without load)
- Speed warning at 9.3 mph
- Speed limitation outside transport mode
- Extra working light, LED 2x, on front fenders
- Extra working light, LED 4x, on front fenders
- 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 counterweight
- Extra rotating beacon, LED, left side on counterweight
- Strobe light replacing STD beacon on boom
- Nato starter socket 24V (1x)
- Color display TFT-7" (17 cm), inside cabin - choose type of camera(s) below:

- Reverse camera, 1x, rear on counterweight
- 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
- Electric heated mirrors, front fender/standard position
- Electric heated and adjustable mirrors, on front fenders (standard position)
- Tire pressure monitoring system (Bluetooth)
- Cabin heater with 220V outlet
- Diesel powered cabin heater 5 kW
- Alcolock Draeger in cabin

Cabin

Structure

- Hydraulic sliding cabin (stroke 93"), anti-collision function, avoid load hitting cabin
- Hydraulic elevating cab (stroke 90") position forward on right side
- Speed limitation depending on cabin position
- Extended rear cabin window 3.9"

Comfort

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

Controls

- Lever steering with switch for forward/reverse
- Mini-wheel steering with F-N-R switch
- Override key switch

Climate

- Sun visor front-roof-rear windows (of black net)
- Sun visor roof window (of reflecting film)
- Microfilter in additional to standard filter
- AC/ECC switched off when door is open
- Pause-heating (break heater function)

Additional Equipment

- Enhanced Safety Package including:
 - Speed limitation outside transport mode
 - Reverse warning system including sensors, camera and displays in cab
 - Tire pressure monitoring system
 - Adjustable speed limiter (default 9.3 mph)
 - Seat belt interlock (machine will not go in gear if seat belt is off)
- Semi-automatic fire suppression system
- 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

Information Systems

- VDI - Vehicle Data Interface

Fleet Management

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

Kalmar Load Measurement System

- Semi-automatic weight checking and recording system including time, date and load**

Color

- Other RAL color than standard, chassis
- Special and multiple colors, chassis
- Other color 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

Training

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

Warranty

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

*** Weight scale is not legal-for-trade in USA/CAN.

* End of delivery of ZF 5WG-261 as of 31 December 2022 for 6,0-7,5 m wheelbase

** Weight scale is not legal-for-trade in USA/CAN.

SPECIFICATIONS

				DRG450-60S5	DRG450-60S5M
MAIN DATA	Type of handling			Container Handling	
	Lift capacity, row 1-2-3-4	Q1 - Q2 - Q3 - Q4	(klbs)	99 - 59 - 28	99 - 66 - 33
	Lift capacity, row 1-2-3-4 (with support jacks)	Q1 - Q2 - Q3 - Q4	(klbs)	-	-
	Load center, from front face of tires, row 1-2-3-4	L4 - L5 - L6 - L7	(in)	77 - 150 - 249	77 - 150 - 249
	Stacking capacity, in container row 1-2-3-4 of 8'6" / 9'6"			5/5 - 5/4 - 4/3	5/5 - 5/4 - 4/3
	Lost load center, to front face of tires	X	(in)	33	37
WEIGHTS	Wheelbase	L3	(in)	237	237
	Service weight, standard truck		(lbs)	148590	153000
	Axle load, front at load center L4, unloaded - loaded	(without support jacks)	(lbs)	76280 - 221785	76280 - 221785
	Axle load, front at load center L5, unloaded - loaded	(without support jacks)	(lbs)	85980 - 191580	85980 - 203265
	Axle load, rear at load center L4, unloaded - loaded		(lbs)	72310 - 26015	76720 - 30425
WHEELS	Axle load, rear at load center L5, unloaded - loaded		(lbs)	62610 - 16535	67020 - 15875
	Tires, dimension, PLY rating, star rating ¹			18x25",PR40/E4	18x25",PR40/E4
	Tire pressure (front - rear)		(psi)	145 - 145	145 - 145
	Track width (front - rear)	S1 - S2	(in)	119 - 102	119 - 102
DIMENSIONS	Boom angle, min - max		(deg)	0 - 60	0 - 60
	Boom height, min - max	H3 - H5	(in)	181 - 717	181 - 717
	Chassis height - top of boom fixation, max	H2	(in)	155	155
	Lift height, max	H4	(in)	594	594
	Boom reach stroke		(in)	275	275
	Truck height - seat height	H6 - H8	(in)	181 - 101	181 - 101
	Overall truck length, with boom	L	(in)	441	441
	Truck width over drive axle	B	(in)	164	164
	Spreader sideshift	V1	(in)	+/-32 (63)	+/-32 (63)
	Spreader rotation		(deg)	+195/-105	+195/-105
	Ground clearance		(in)	9	9
	Aisle width with 20'-40' container	A1 - A2	(in)	441 - 535	441 - 535
	Turning radius, outer with 20'-40' container (at 90 degree turn)	R1 - R3	(in)	319 - 370	319 - 370
POWERTRAIN	Max travel speed, fwd unloaded - rated load / rev unloaded - rated load		(mph)	16-15 / 12-11	16-15 / 12-11
	Lifting speed, unloaded - 70% of rated load		(fps)	1.38 - 0.82	1.38 - 0.82
	Lowering speed, unloaded - rated load		(fps)	1.18 - 1.18	1.18 - 1.18
	Drawbar pull		(lbf)	66300	66300
OTHER					
	Tank volumes of working oil & brake oil		(gal)	195 (158 + 37)	195 (158 + 37)
	Working hydraulic pressure boom / spreader, max		(psi)	3335 / 2320	3335 / 2320
	Noise level LpAZ (EN12053), inside cabin²		(dB(A))	69 - 71	69 - 71
	Noise level LWAZ (EN12053), outside cabin²		(dB(A))	105 - 109	105 - 109

DRG450-60S5X	DRG450-65S5	DRG450-65S5X	DRG450-65S5XS	DRG450-65S6	DRG420-65S6X	DRG450-65S6H
Container Handling						
99 - 77 - 39	99 - 70 - 35	99 - 83 - 46	99 - 83 - 46	99 - 70 - 35 - 19	99 - 83 - 46 - 26	99 - 72 - 39 - 22
-	-	-	99 - 90 - 63	-	-	-
73 - 150 - 249	77 - 150 - 249	73 - 150 - 249	73 - 150 - 249	89 - 150 - 249 - 347	85 - 150 - 249 - 347	117 - 150 - 249 - 347
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
37	33	37	37	33	37	33
237	256	256	256	256	256	256
170860	153220	170415	177030	155425	170860	162040
78485 - 223990	77160 - 219140	79365 - 221345	84880 - 226855	79365 - 225975	80470 - 227075	85980 - 243170
88625 - 226855	85980 - 207015	88845 - 233690	94360 - 239420	87080 - 208115	88625 - 233470	90390 - 215170
92375 - 46075	76060 - 33290	91050 - 48280	92155 - 49385	76060 - 28660	90390 - 42990	76060 - 18080
82230 - 21165	67240 - 16755	81790 - 20505	82675 - 21385	68345 - 17855	82230 - 21165	71650 - 19620
18x33",PR36/E4	18x25",PR40/E4	18x33",PR36/E4	18x33",PR36/E4	18x25",PR40/E4	18x33",PR36/E4	18x25",PR40/E4
145 - 145	145 - 145	145 - 145	145 - 145	145 - 145	145 - 145	145 - 145
119 - 110	119 - 102	119 - 110	119 - 110	119 - 102	119 - 110	119 - 102
0 - 60	0 - 60	0 - 60	0 - 60	0 - 62	0 - 62	0 - 63
185 - 720	181 - 717	185 - 720	185 - 720	177 - 758	181 - 762	181 - 819
159	155	159	159	155	159	155
598	594	598	594	637	641	696
275	275	275	275	303	303	334
185 - 105	181 - 101	185 - 105	185 - 105	177 - 101	181 - 105	181 - 101
441	461	461	461	473	473	500
164	164	164	164	164	164	164
+/-32 (63)	+/-32 (63)	+/-32 (63)	+/-32 (63)	+/-32 (63)	+/-32 (63)	+/-32 (63)
+195/-105	+195/-105	+195/-105	+195/-105	+195/-105	+195/-105	+195/-105
11	9	11	11	9	11	9
441 - 535	457 - 535	457 - 535	457 - 535	469 - 547	469 - 547	480 - 559
319 - 370	335 - 370	335 - 370	335 - 370	335 - 372	335 - 372	335 - 372
16-15 / 12-11	16-15 / 12-11	16-15 / 12-11	16-15 / 12-11	16-15 / 12-11	16-15 / 12-11	16-15 / 12-11
1.38 - 0.82	1.38 - 0.82	1.38 - 0.82	1.38 - 0.82	1.38 - 0.82	1.38 - 0.82	1.38 - 0.82
1.18 - 1.18	1.18 - 1.18	1.18 - 1.18	1.18 - 1.18	1.18 - 1.18	1.18 - 1.18	1.18 - 1.18
66300	66300	66300	66300	66300	66300	66300
195 (158 + 37)	195 (158 + 37)	195 (158 + 37)	195 (158 + 37)	195 (158 + 37)	195 (158 + 37)	195 (158 + 37)
3335 / 2320	3335 / 2320	3335 / 2320	3335 / 2320	3335 / 2320	3335 / 2320	3335 / 2320
69 - 71	69 - 71	69 - 71	69 - 71	69 - 71	69 - 71	69 - 71
105 - 109	105 - 109	105 - 109	105 - 109	105 - 109	105 - 109	105 - 109

1. 4 + 2 pneumatic / diagonal tires.
2. Depending on ECO Drive Mode setting.

DRIVETRAIN

		DRG450		
		Tier 3*	Tier 3*	Tier 3*
Engine brand		Cummins	Volvo	Volvo
Engine model		QSM-11-C330	TAD-1151-VE	TAD-1152-VE
Engine after treatment type		-	-	-
AdBlue/DEF/Urea		-	-	-
Particle filter		-	-	-
HVO100 (EN15940) compatible		Yes	Yes	Yes
Engine type		6-inline	6-inline	6-inline
Engine displacement	(L)	10.8	10.8	10.8
Rated and max power (Dana)	(hp)	330 / -	355 / -	380 / -
Max torque (Dana)	(ft-lbs)	1235 / -	1315 / -	1355 / -
Max engine speed (Dana)	(rpm)	1900 / -	1900 / -	1900 / -
Fuel consumption - average diesel	(gal/h)	3.7 - 5.3	3.7 - 5.3	3.7 - 5.3
Fuel consumption - average Urea	%	-	-	-
ECO Drive Modes (EDM) / modes		3 modes / Power - Normal - Eco		
Transmission brand / gears		Dana / fwd 5 + rev 3 gears		
Clutch type		Torque converter		
Transmission model		Dana TE-30	Dana TE-30	Dana TE-30
Gearbox, type		Hydrodynamic Automatic (Power-shift)		
Drive axle brand / series**		Kessler D102 / D111		
Service brake / cooling		Wet Disc Brakes with oil cooling		
Steer axle brand / series		Kalmar / single cylinder / extra wide		
Alternator, power	(W)	AC 2800	3080 W AC	3080 W AC
Alternator, voltage x current	(V x Amp)	28 x 100	28 x 150	28 x 150

DRG450			
Tier 4F	Tier 4F	Tier 4F	Tier 4F
Volvo	Volvo	Volvo	Volvo
TAD-1171-VE	TAD-1172-VE	TAD-1181-VE	TAD-1182-VE
SCR	SCR	DOC, DPF, SCR, ASC	DOC, DPF, SCR, ASC
Yes	Yes	Yes	Yes
-	-	Yes	Yes
Yes	Yes	Yes	Yes
6-inline	6-inline	6-inline	6-inline
10.8	10.8	10.8	10.8
- / 355	- / 380	355 / -	380 / -
- / 1315	- / 1355	1320 / -	1355 / -
- / 2000	- / 2000	1900 / -	1900 / -
3.7 - 5.3	3.7 - 5.3	3.7 - 5.3	3.7 - 5.3
1 - 5	1 - 5	3 - 7	3 - 7
3 modes / Power - Normal - Eco			
Dana / fwd 5 + rev 3 gears			
Torque converter			
Dana TE-30	Dana TE-30	Dana TE-30	Dana TE-30
Hydrodynamic Automatic (Power-shift)			
Kessler D102 / D111			
Wet Disc Brakes with oil cooling			
Kalmar / single cylinder / extra wide			
3080 W AC	3080 W AC	3080 W AC	3080 W AC
28 x 150	28 x 150	28 x 150	28 x 150

* Tier 3 engines are not for use in US/Canada or territories thereof.
** Wheelbases 236"-295" have D102, wheelbases 325"-364" have D111



Top Lifter



Magnet for thick slabs



Pipe Handler



Grapple



Barge handler



CombiLift



Lift Hook



Tool Carrier

See Kalmar Industrial brochure for Lift Hook and Tool Carrier models and features.