



Guaranteed to cut costs.

With our new
eco-efficient solution.

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.

The Kalmar Eco reachstacker can offer your business:



Up to a 40% reduction in fuel costs and consumption.



A significant reduction in operating noise for your operators and others nearby.



Up to a 40% reduction in CO₂, NO_x, SO_x and particulate emissions.



An ergonomically designed cabin for operational ease.



A much smoother drive, which will reduce stress and pressure on your driver's body.

Proven in the field.

Many customers are already benefiting from substantially reduced fuel consumption and CO₂ emissions around the globe, proving that this technology not only delivers on the promised savings but also on performance.

Power Mode: 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 Mode: for normal productivity and yard operations, you can expect 5-10% lower fuel consumption without compromising on productivity.

Save
5-10%
on fuel consumption

Economy Mode: for off-peak or night time operations when productivity is not essential or lower noise levels are required, you can expect 10-20% lower fuel consumption.

Save
10-20%
on fuel consumption

Guaranteed to save you thousands.

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 optimize its operational efficiency. This will substantially help to reduce your cost per move.

Guaranteed to cut costs.

Your Eco Reachstacker 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.

Quiet and eco-efficient.

Cabooter Group, currently operates 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-efficient 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 is a new generation of reachstackers, that are really good."

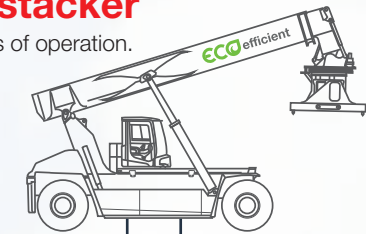
Peter Pardoel, Business Development and Operational Excellence, Cabooter Group.

Based on months 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.

Kalmar Eco Reachstacker

Typical operating data for 2000 hours of operation.

Gallons of fuel **7170**
USD(\$) **21509**
Tonnes of CO₂ **87**



Saving you **up to 25%** in fuel costs in comparison to a recent machine.

Saving you **over 40%** in fuel costs in comparison to an older machine.

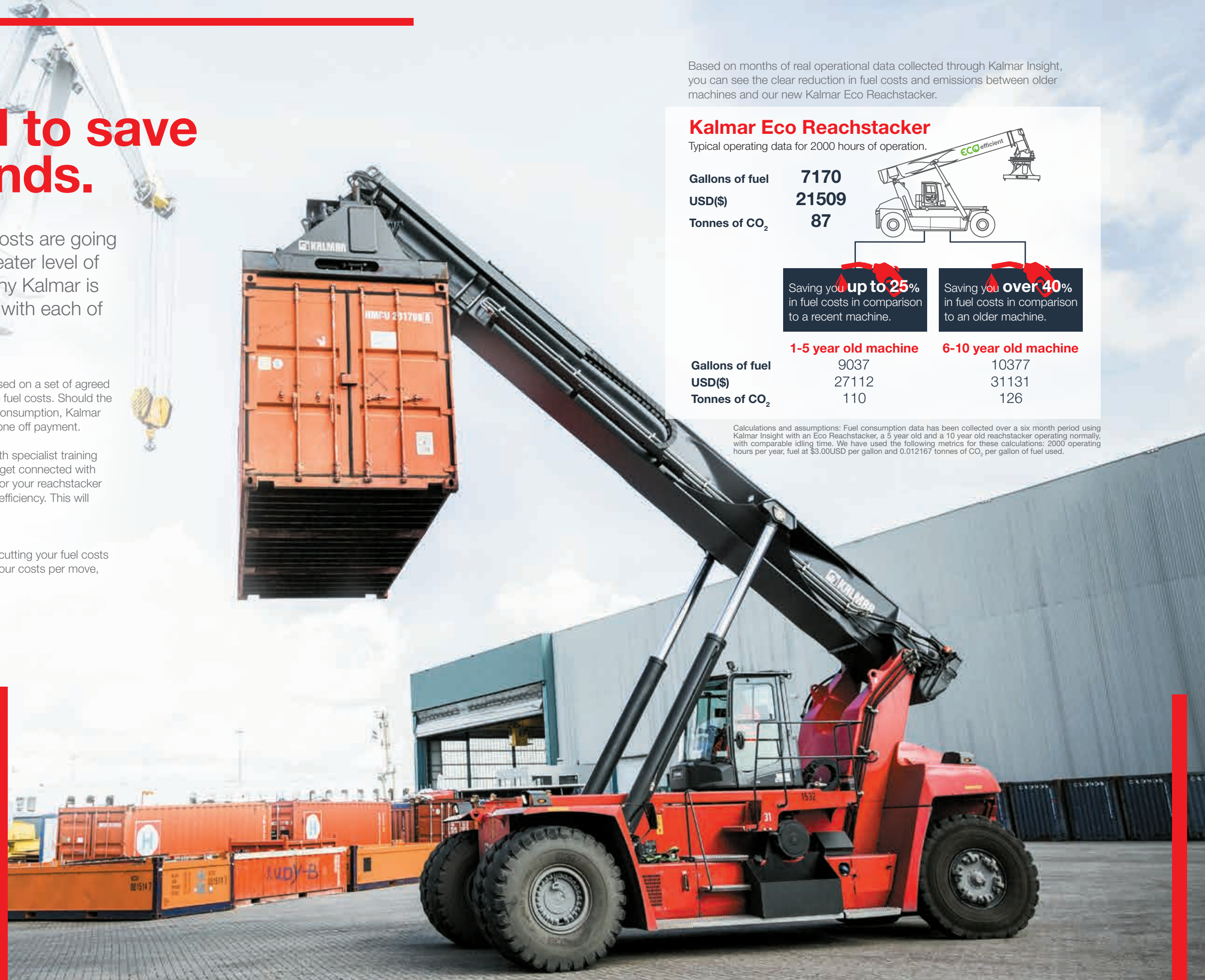
1-5 year old machine

Gallons of fuel **9037**
USD(\$) **27112**
Tonnes of CO₂ **110**

6-10 year old machine

Gallons of fuel **10377**
USD(\$) **31131**
Tonnes of CO₂ **126**

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 \$3.00USD per gallon and 0.012167 tonnes of CO₂ per gallon of fuel used.



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

Enhanced driving experience.

Kalmar Care.



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, dramatically reducing 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.

Making sure your business never stops.

We offer you four different types of service and maintenance contracts, for any brand of equipment. Each is designed to help you improve your operational efficiency, drive productivity and secure financial predictability. The different contract types include a set of standardized service modules that can be tailored to meet your business needs. Opposite is an overview of the four contracts.

When the right part matters.

When something needs to be replaced you need a spare part that meets your exact needs – urgently. Kalmar offers a rapid delivery service for over 50,000 premium-quality genuine parts to anywhere in the world, with installation support if needed.

You may also want to consider outsourcing all or part of your spare parts management and inventory control, with Kalmar Parts Care. Kalmar Parts Care makes sure that critical spare parts are always on hand so your equipment downtime is kept at a minimum. Each Kalmar Parts Care plan is based on your operational needs, talk to us today and see how we can lift your parts availability, while reducing your inventory costs.

The four flexible types of service contracts.

Kalmar Support Care

We support your maintenance processes on demand.

- Availability of competent people with the right tools and parts
- Provides additional skills to existing maintenance organisation.

Kalmar Essential Care

We perform your agreed maintenance tasks proactively.

- Availability of competent people with the right tools and parts
- Higher degree of financial predictability
- Reduced operational risk to customer
- Improved availability of machines.

Kalmar Complete Care

We meet your complete maintenance requirements.

- Predictive maintenance planning
- Low operational risk to customer
- Reduced equipment downtime
- Reduced total cost of operation
- Increased operational predictability.

Kalmar Optimal Care

We optimize your business performance.

- Guaranteed availability
- Reduced tied-in capital
- Improved business performance
- Increased peace of mind.

Kalmar Training Academy.

Driving a Kalmar Eco Reachstacker is different than traditional reachstackers and, to get the most out of it, our training academy offers a range of courses for both your technicians and operators. Operators will be shown how to optimize 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.



Improve your fleet performance and your business.

Optimize your reachstacker with Kalmar Insight.

Kalmar Insight is a performance management tool for cargo and material handling, which gives you a valuable and easy to use overview of your daily operations based on equipment status and performance. Making it quicker for you to take action on relevant information that will help you improve your operations, your equipment's performance and your business.

Kalmar Insight* comes fitted in all new Kalmar machines and can be retrofitted to existing Kalmar machines or those built by other manufacturers. Kalmar Insight is included when the Eco Reachstacker is chosen with a Fuel Savings Guarantee.



Access on mobile, tablet or traditional screen.

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



View each machine's movements as they occur.



Plan your maintenance and spare parts needs.



View each operator's performance in real time.

More support.

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.

Financing options for you.

You may choose to buy your new Eco Reachstacker outright or consider leasing or renting your equipment. There are a range of leasing and renting options that give you the financial predictability you need and the option to upgrade your equipment after a fixed period. With our leasing package, you can focus on your core operations, while all your service and maintenance needs are covered. Kalmar can also help you with trading-in your old equipment.



How you will benefit from the Kalmar Eco Reachstacker:

- Big reduction in fuel consumption
- Big reduction in exhaust emissions
- Big reduction of noise levels, inside and outside the cabin
- Increased operation precision and control
- Increased driver comfort with less stresses and strains
- Increased driver efficiency and productivity
- Increased ease of operation.

Eco Reachstacker options.

Kalmar has an extensive list of options available that can help to improve operational safety or lower your fuel consumption. You choose which are right for you.

Kalmar eco-efficiency options.



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.



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



Kalmar Speed Limitation System. The Kalmar Drive Speed Limitation System automatically restricts the speed at which your equipment can be operated, helping to reduce wear and tear, minimize product damage and improve fuel efficiency.



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.

Kalmar safety options.



Reverse Warning System (RWS). 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.



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



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



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:

- 2 or 4 on the front fenders
- 2, 4 or 6 on the lift boom
- 2 or 4 on the spreader
- 2 more on rear counterweight.



Standard.

Kalmar DRG 420S-450S (S = Container - Top Lift)
Kalmar DRG 450C-450C (C = Intermodal - Combi Lift)
Kalmar DRG 500A-540A (A = Industrial - Tool Carrier)
Kalmar DRG 570Z-600Z (Z = Industrial - Lift Hook)

Norms, Standards and Regulations

- Safety Low & High Lift Trucks ANSI/ B56.1
- 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 complete truck

Steer Axle (Rear)

- Kalmar steer axle mounted dual pivot bearings
- Orbital 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 (163.4")
- Oil-cooled Wet Disc Brakes (WDB)
- High pressure filter (10 μ) for the brakes
- Brake oil tank (37 gal.), cooling & breather filter

Wheels (Tires & Rims)

- Drive and steer tires 18.00x25"/PR40 (6x)
- Drive and steer tires 18.00x33"/PR36 (6x), for stronger models with higher lift capacity

Drive Train

- Volvo D8 in EU stage 3A (EPA Tier 3)[†]
- Volvo D8 in EU stage 4 (EPA Tier 4 Final)
- 6-cylinder diesel engines with pre-heater, displacement 7.70 L
- High power & torque with low fuel consumption
- Engine monitoring and protection system
- Automatic CVT transmission, DRTS R2-RS
- Hydrostatic slow-speed / mechanical high-speed
- Seamless speed shifting and soft directional shifting (FWD/REV)
- 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 μ)
- Hydraulic long-life fine filter with by-pass (5 μ)
- Servo filter for the work hydraulics (10 μ)
- Pressure filter for the brakes (10 μ)
- 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

- S = Top Lift, 99,000 lbs., 20'-40', MPS, TWL + 4 lift hooks
- C = Combi Lift, 99,000 lbs., 20'-30'-40', HPS, TWL, lift legs, 4 lift hooks, length tilt & tilt lock
- A = Tool Carrier, max 143,000 lbs., MPS, TWL (98.4"x29.9") & 4 lift eyes

- Z = Lift Hook, max 154,000 lbs., 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° (2 motors & 2 brakes)
- S-C-A = Lift hooks for slings on end beams (4x)
- S-A = Mechanical Pile Slope MPS ±5°
- C = Hydraulic HPS ±5°
- 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 (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 best ergonomics
- Large windows, good visibility, in all directions
- Manual moveable cabin (stroke 93.5")
- Step for roof access
- Instep handle (left side)
- Sliding window on both sides
- Doors with air damper and key lock (left & right)
- Tinted laminated windows

Comfort

- Comfort seat Kalmar, mechanical spring, high back
- Adjustable armrest (right side) & 2-point safety belt
- Inside rear view mirror (right side)
- Interior lights with fade away function
- 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 accelerator 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 - hand brake (on/off) leaving seat
- Hour meter

Climate

- ECC, electronic climate control, very powerful cooler, heater and ventilator, with programmable settings.
- Air-condition with fresh air and recirculation filter
- Wipers/washers on front, rear and roof windows
- Interval wiper functions on front, rear and roof

Information Systems

- Color display & automatic fault analysis
- Menu control with toggle wheel & push buttons
- Electronic safety, overload, scale & synchronized lift

- 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

Coasting Deceleration Mode (CDM)

- Soft braking
- Medium braking (default)
- Hard braking*

Operator menu:

- System voltage
- Engine rpm
- Travelling speed (km/h or m/h)
- Hydraulic oil temperature
- Transmission oil temperature
- Engine oil pressure & coolant level
- Engine oil level
- Clock and date
- Load & Load distance (LC)
- Boom extension & Boom angle
- Operating time (hours)
- Service time indicator (hours)
- Boom angle and Boom extension
- Electronic weight scale functions
- Status of Heating, Ventilation and AC system (HVAC)
- Fuel level (diesel and optional DEF)
- Estimated operating time before empty fuel tank (hour/min)
- Service indicator
- 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

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 stickers
- Information & joystick stickers
- Fuse diagram
- Instruction manual
- Maintenance manual
- Spare parts catalogue

Options.

Kalmar DRG 420S-450S (S = Container - Top Lift)
Kalmar DRG 450C-450C (C = Intermodal - Combi Lift)
Kalmar DRG 500A-540A (A = Industrial - Tool Carrier)
Kalmar DRG 570Z-600Z (Z = Industrial - Lift Hook)

Chassis

- DRG range in Toplift (S), Intermodal (C) and Industrial handlings (A + Z)
- Wheelbases in 236" / 256"
- Duplex 2-stage booms for S-C-A-Z (H4 = 511.8" / 700.8")

Body

- Anti slip protection on fenders and tanks
- Mud flaps (front or/and rear)
- External rear view mirrors (2x)
- Noise insulation kit for the complete truck

Steer Axle (Rear)

- Steer cylinder space 0.55" (plus 19.7" radius).

Wheels (Tires & Rims)

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

Drive train

- Volvo TAD853VE, 6-inline, 315 hp, 966 lb-ft (EPA Tier 3)[†]
- Volvo TAD873VE, 6-inline, 315 hp, 966 lb-ft (EPA Tier 4F)
- Start/stop function to save fuel
- Automatic engine and ignition stop at idle
- Pre-cleaner air intake incl raised air intake
- Various programmable speed limitations

Load-Sensing Hydraulics

- High pressure filter

Lifting boom

- Duplex 2-stage S5 (5/5, H4 = 594.5"-598.4")
- Duplex 2-stage S6 (6/5, H4 = 633.8"-637.8")
- Duplex 2-stage S6H (6/6, H4 = 696.8"-700.8")
- Duplex 2-stage C5 (5/5, H4 = 586.6"-590.5")
- Duplex 2-stage A5 (5/5, H4 = 590.5"-594.5")
- Duplex 2-stage Z (-/-, H4 = 511.8")

Attachment

- Tilt function ±5° (FWD/REV), with tilt lock & speed limit 3.1 mph
- Hydraulics Pile Slope HPS ±5° (side tilt), with tilt lock & speed limit 3.1 mph
- Rotations stop spreader at ±25° (incl override switch)
- Automatic extension 20'-40' with 30' stop
- Overhigh folding legs OFL = 63.0" or 78.7" (integral)
- Boom nose extension L = 39.4" or 63.0"
- Long boom nose, extension = 63.0"
- 2 extra lift eyes in center of spreader (2 x 49,500 lbs.)
- 4 extra lift eyes in middle part of spreader (4 x 24,500 lbs.)
- Soft landing with ultrasonic sensor
- Twistlock beam rubber damper, 3.9" mm extension (noise reduction)
- Extended twistlocks 11.8"
- Side Tilt Spreader 0-55°, 99,000 / 70,500 lbs.
- Length Tilt Spreader 0-55°, 99,000 / 70,500 lbs.
- Hydraulic door opener - for tilt spreader - on one side
- Coil ram sub frame, STD, 77,000 lbs., ID / OD = 19.7" / 118.1"
- Coil ram sub frame, Tool Carrier, 77,000 lbs., ID / OD = 19.7" / 118.1"

Electrical System 24V

- Radio with CD/MP3/BT
- Extra sockets 2x24V + 2x12V in cabin left hand A-pillar (US/CAN standard)
- Extra sockets 2x24V + 2x5V USBs in cabin left hand A-pillar
- Electric air pressure horn (US/CAN standard)
- Height limitation system for lifting boom
- Load center limitation for lifting boom
- Speed limitation, please specify mph
- Container lights, LED 4x, on front fenders
- Extra working light, LED 2x, on spreader
- Extra working light, LED 2x, on boom
- Electric heated mirrors, front fender/std pos
- Electric heated & adjustable mirrors, front fenders/std pos
- TV-camera with monitor in cab direction rearward
- Reverse warning system, incl. 4x sensors, TV-camera & monitor
- Tire pressure monitoring system (Bluetooth)
- Cabin heater with 220V outlet
- Diesel powered cabin heater 17,000 BTU
- Alcolock Draeger in cabin

Cabin

Structure

- Hydraulic sliding cabin (stroke 93.5"), anti-collision function, avoid container / trailer to hit cabin in front position
- Speed limitation depending on cabin position
- Hydraulic elevating cab (stroke 90.5")

Comfort

- Seat with air-cushion, heating & 3-point belt
- Head rest for the seat
- Armrest with adjustment (left side)
- Horizontal dampening/suspension of seat
- Extra trainer seat incl 2-point safety belt (left side)
- Bracket for terminal and monitor (right side)
- Writing pad, A4 paper box and reading lamp (right side)

Controls

- Lever steering incl switch for forward/reverse
- Mini-wheel steering incl switch for forward/reverse

Climate

- Sun visor front-roof-rear windows (of black net)
- Sun visor roof window (of reflecting film)
- Post-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 in cab display
 - Adjustable speed limiter (default 9 mph)
 - Seat belt interlock, will not go in gear unless seatbelt is on
- Semi-automatic fire suppression system
- Tool kit
- Lockable fuel cap
- Central greasing (base truck / spreader)
- Filter kit 2000 hrs

Fleet Management

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

Fuel Saving Guarantee (see pp 4-5)

- 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

- Automatically measures and records equipment load
- SOLAS compliant

Color

- Other color than standard, chassis
- Reinforced anti-corrosion protection

Documentation and Decals

- Extra set of documentation
- Workshop manuals
- Volvo trouble shooting and repair kit
- Load chart lbs/inch in cab & sign "no riders" (US/CAN standard)
- Documentation on cd or memory stick

Training

- Eco Reachstacker driver training
- Contact Kalmar Training Center for training programs

[†] Tier 3 engines are not for use in US/Canada or territories thereof.

Drivelines.

Eco Reachstacker

Engine emission approvals		Tier 3†	Tier 4F
Engine emission brand / series		Volvo D8	Volvo D8
Engine model		TAD853VE	TAD873VE
Engine after treatment type		No SCR / DEF	With SCR / DEF
		No particle filter	No particle filter
Engine fuel / type		Diesel / 4-stroke	Diesel / 4-stroke
Engine design / cylinders		6-inline / common rail	6-inline / common rail
Engine displacement	(L)	7.7	7.7
Max power	(hp)	315	315
Max torque	(lb-ft)	966	966
Fuel consumption – average diesel	(gal/h)	2.6-4.0	2.6-4.0
Fuel consumption – average DEF	(%)	-	1 - 5
Transmission model		Dana Rexroth R2-RS	
Transmission gear shift type		Hydrostatic + Mechanical (power split)	
Transmission clutch type		CVT (Continuous Variable Transmission)	
Transmission speed range (FWD - REV)		3 - 2	
Drive axle brand / series		Kessler D-102 (WDB)	
Service brake / cooling		Wet Disc Brakes with oil cooling	
Alternator, power	(W)	AC, 3640 (28 x 130)	AC, 3640 (28 x 130)

† Tier 3 engines are not for use in US/Canada or territories thereof.

Attachments.

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



Container Handling - Top Lift (S)



Intermodal Handling - Top Lift and Trailer Lift (C)



Industrial Handling - Tool Carrier (A)



Industrial Handling - Lift Hook (Z)



Container Handling.

		DRG420-60S5E	DRG450-60S5E	DRG450-60S5ME	DRG450-60S5XE	DRG450-65S5E	DRG450-65S5XE	DRG450-65S5XSE	DRG450-65S6E	DRG450-65S6XE	DRG450-65S6HE	DRG450-65S6HXE	DRG450-65S6HXSE	
MAIN DATA	Type of handling	Container handling												
	Lift capacity, row 1-2-3-4	Q1 - Q2 - Q3 - Q4 (klbs)	92 - 55 - 26	99 - 59 - 28	99 - 66 - 33	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 - 85 - 46 - 28	99 - 85 - 46 - 28
	Lift capacity, row 1-2-3-4 (including 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 - 248	77 - 150 - 248	77 - 150 - 248	73 - 150 - 12	77 - 150 - 248	73 - 150 - 12	73 - 150 - 12	89 - 150 - 248 - 347	85 - 150 - 248 - 347	116 - 150 - 248 - 347	112 - 150 - 248 - 347	112 - 150 - 248 - 347
	Stacking capacity, in container row 1-2-3-4 of 8'6" / 9'6"	(in)	5/5 - 5/4 - 4/3											
	Lost load center, to front face of tires	X (in)	33	33	33	37	33	37	37	33	37	33	37	37
Wheelbase	L3 (in)	236												
WEIGHTS	Service weight, standard truck	(lbs)	144405	148590	153000	170860	170420	177030	155425	170860	170860	162040	181880	184085
	Axle load, front at load center L4, unloaded - loaded	(lbs)	76060 - 211860	76280 - 221785	76280 - 221785	78485 - 223985	79365 - 221340	84875 - 226855	79365 - 225970	80470 - 227075	80470 - 227075	85980 - 243165	91490 - 248680	93695 - 250885
	Axle load, front at load center L5, unloaded - loaded	(lbs)	85760 - 183645	85980 - 191580	85980 - 203265	88625 - 226855	88845 - 233690	94355 - 239420	87080 - 208115	88625 - 233465	88625 - 233465	90390 - 215170	96560 - 245370	98765 - 247575
	Axle load, rear at load center L4, unloaded - loaded	(lbs)	68345 - 25130	72310 - 26015	76720 - 30425	92375 - 46075	91050 - 48280	92150 - 49385	76060 - 28660	90390 - 42990	90390 - 42990	76060 - 18080	90390 - 32410	90390 - 32410
Axle load, rear at load center L5, unloaded - loaded	(lbs)	58640 - 15875	62610 - 16535	67020 - 15875	82230 - 21165	81790 - 20505	82675 - 21385	68345 - 17855	82230 - 21165	82230 - 21165	71650 - 19620	85320 - 22485	85320 - 22485	
WHEELS	Tires, dimension, PLY rating, star rating ¹		18 x 25", PR40, E4	18 x 25", PR40, E4	18 x 25", PR40, E4	18 x 33", PR36, E4	18 x 25", PR40, E4	18 x 33", PR36, E4	18 x 33", PR36, E4	18 x 25", PR40, E4	18 x 33", PR36, E4	18 x 25", PR40, E4	18 x 33", PR36, E4	18 x 33", PR36, E4
	Tire pressure (front - rear)	(psi)	145 - 145											
	Track width (front - rear)	S1 - S2 (in)	119 - 102	119 - 102	119 - 102	119 - 110	119 - 102	119 - 110	119 - 110	119 - 102	119 - 110	119 - 102	119 - 110	119 - 110
DIMENSIONS	Boom angle, min - max	(deg)	0 - 60											
	Boom height, min - max	H3 - H5 (in)	182 - 322	182 - 322	182 - 322	186 - 326	182 - 322	186 - 326	186 - 326	178 - 364	182 - 368	182 - 31	186 - 35	186 - 35
	Chassis height - top of boom fixation, max	H2 (in)	155	155	155	159	155	159	159	155	159	155	159	159
	Lift height, min-max in twistlocks, row 1	H4 (in)	594	594	594	598	594	598	594	637	641	696	700	700
	Boom reach stroke	(in)	275											
	Truck height - seat height	H6 - H8 (in)	182 - 102	182 - 102	182 - 102	186 - 106	182 - 102	186 - 106	178 - 102	178 - 102	182 - 106	182 - 102	186 - 106	186 - 106
	Overall truck length, without - with boom	L (in)	441											
	Truck width over drive axle	B (in)	164											
	Spreader sideshift	V1 (in)	+/-31 (63)											
	Spreader rotation	(deg)	+195/-105											
	Ground clearance	(in)	9.8	9.8	9.8	11.8	9.8	11.8	11.8	9.8	11.8	9.8	11.8	11.8
Aisle width with 20'-40' container	A1 - A2 (in)	441 - 536												
Turning radius, outer with 20'-40' container	R1 - R3 (in)	319 - 371												
DRIVE LINE	Travel speed, fwd unloaded - rated load / rev unloaded - rated load, max	(mph)	17 - 13 / 11 - 11											
	Lifting speed, unloaded - 70% of rated load	(fps)	1.38 - 0.82											
	Lowering speed, unloaded - rated load	(fps)	1.18 - 1.18											
	Drawbar pull / towing capacity, max	(lbf)	56200											
OTHER	Tank volumes of working oil & brake oil	(gal)	196 (159 + 37)											
	Working pressure boom/spreader, max	(psi)	3336											
	Noise level LpAZ (EN12053), inside cabin ²	(dB(A))	68-70											
	Noise level LpAZ (2000/14/EC), outside cabin ²	(dB(A))	103-106											

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

Intermodal and Industrial Handling.

		DRG450-60C5E	DRG450-60C5XE	DRG450-65C5E	DRG450-65C5XE	DRG450-65C5XE	DRG500-60A5E	DRG540-60A5XE	DRG540-65A5XE	DRG540-65A5XE	DRG570-65ZE	DRG600-65ZXE	DRG600-65ZXE	
MAIN DATA	Type of handling	Intermodal handling				Tool carrier				Lifting hook				
	Lift capacity, row 1-2-3 / load center L4-L8 ¹	Q1 - Q2 - Q3 - Q4 - Q5 (klbs)	99 - 55 - 22	99 - 70 - 33	99 - 61 - 28	99 - 74 - 37	99 - 74 - 37	110-59-35-24-N/A	119-72-44-30-N/A	119-83-55-37-N/A	119-83-55-37-N/A	125-119-68-41-30	132-132-83-55-39	132-132-83-55-39
	Lift capacity, row 1-2-3 / load center L4-L8 ¹	Q1 - Q2 - Q3 - Q4 - Q5 (klbs)	-				99 - 83 - 52	-	-	-	119-99-74-50-N/A	-	-	132 - 132 - 99 - 74 - 52
	Stacking capacity, in container row 1-2-3 of 8'6" / 9'6"	(in)	77 - 150 - 248	73 - 150 - 248	77 - 150 - 248	73 - 150 - 248	73 - 150 - 248							
	Load center, from front face of tires	L4 - L5 - L6 - L7 - L8 including jacks (in)	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	78.7 - 157.5 - 236.2 - 315.0 - 393.7				59.0 - 78.7 - 157.5 - 236.2 - 315.0		
	Lost load center, to front face of tires	X (in)	33	37	33	37	37	33	37	37	37	33	37	37
	Wheelbase	L3 (in)	236	236	256	256	256	236	236	256	256	256		
WEIGHTS	Service weight, standard truck	(lbs)	162040	180340	163365	179235	184085	138890	72600	74000	76200	61100	70900	72100
	Axle load, front at load center L4, unloaded - loaded	(lbs)	90390 - 235890	92595 - 238095	91710 - 233690	93475 - 235450	98105 - 240080	65035 - 226635	29600-108800	31000-109600	33200-111800	26000-103500	27300-114600	28300-115600
	Axle load, front at load center L5, unloaded - loaded	(lbs)	102955 - 200840	105820 - 232365	103395 - 209215	105820 - 235450	110670 - 240300	-				-		
	Axle load, rear at load center L4, unloaded - loaded	(lbs)	71650 - 25355	87745 - 41445	71650 - 28880	85760 - 42990	85980 - 43210	73855 - 22485	43000-16300	43000-18400	43000-18400	35100-14600	43600-16300	43600-16300
	Axle load, rear at load center L5, unloaded - loaded	(lbs)	59085 - 16315	74515 - 18520	59965 - 15875	73415 - 18740	73415 - 18740	-				-		
WHEELS	Tires, dimension, PLY rating, star rating ²		18 x 25", PR40, E4	18 x 33", PR40, E4	18 x 25", PR40, E4	18 x 33", PR40, E4	18 x 33", PR40, E4	18 x 25", PR40, E4	18 x 33", PR36, E4	18 x 33", PR36, E4	18 x 33", PR36, E4	18 x 25", PR40, E4	18 x 33", PR36, E4	18 x 33", PR36, E4
	Tire pressure (front - rear)	(psi)	145 - 145				145 - 145	145 - 145				145 - 145		
	Track width (front - rear)	S1 - S2 (in)	119 - 102	119 - 110	119 - 102	119 - 110	119 - 110	119 - 102	119 - 110	119 - 110	119 - 110	119 - 102	119 - 110	119 - 110
DIMENSIONS	Boom angle, min - max	(deg)	0 - 60				0 - 60	0 - 60				0 - 58	0 - 47	0 - 47
	Boom height, min - max	H3 - H5 (in)	182 - 322	186 - 326	182 - 322	186 - 326	186 - 326	182 - 322	185-720	185-720	185-720	181-716	185-720	187-724
	Chassis height - top of boom fixation, max	H2 (in)	155	159	155	159	159	155	159	159	159	155	159	159
	Lift height, min-max in twistlocks, row 1	H4 (in)	586	590	586	590	586	596	600	600	600	602	606	606
	Boom reach stroke	(in)	275				275	275	7000	7000	7000	7000		
	Truck height - seat height	H6 - H8 (in)	182 - 102	186 - 106	182 - 102	186 - 106	186 - 106	182 - 102	185 - 105	185 - 105	185 - 105	181 - 105	185 - 105	185 - 105
	Overall truck length, without - with boom	L (in)	441	441	461	461	461	426	426	445	445	429	429	429
	Truck width over drive axle	B (in)	164				164	164	164	164	164	164		
	Spreader sideshift	V1 (in)	+/-31 (63)				+/-31 (63)	+/-17				-		
	Spreader rotation	(deg)	+195/-105				+195/-105	+195/-105				360 endless		
	Ground clearance	(in)	9.8	11.8	9.8	11.8	11.8	11.8				11.8		
	Aisle width with 20'-40' container	A1 - A2 (in)	441 - 536	441 - 536	457 - 536	457 - 536	457 - 536	-				-		
Turning radius, outer with 20'-40' container	R1 - R3 (in)	319 - 371	319 - 371	335 - 371	335 - 371	335 - 371	319	164	164	164	164			
DRIVE LINE	Travel speed, fwd unloaded	(mph)	17 - 13 / 11 - 11				17 - 13 / 11 - 11	17 - 13 / 11 - 11				17 - 3 / 11 - 3		
	- rated load / rev unloaded - rated load, max	(fps)	1.38 - 0.82				1.38 - 0.82	1.38 - 0.78				1.38 - 0.72		
	Lifting speed, unloaded - 70% of rated load	(fps)	1.18 - 1.18				1.18 - 1.18	1.18 - 1.18				0.65 - 1.18		
	Lowering speed, unloaded - rated load	(fps)	56200				56200	56200				56200		
OTHER	Drawbar pull / towing capacity, max	(lbf)	56200				56200	56200				56200		
	Tank volumes of working oil & brake oil	(gal)	196 (159 + 37)				196 (159 + 37)	196 (159 + 37)				196 (159 + 37)		
	Working pressure boom/spreader, max	(psi)	3336				3336	3336				3336		
	Noise level LpAZ (EN12053), inside cabin ³	(dB(A))	68-70				68-70	68-70				68-70		
Noise level LpAZ (2000/14/EC), outside cabin ³	(dB(A))	103-106				103-106	107-110				107-110			

1. Rows for Intermodal handling / Load center for Industrial handling
2. 4 + 2 pneumatic / diagonal tires
3. Depending on ECO Drive Mode setting



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Making your every move count

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