
Guaranteed to
CUT
COSTS
EFFICIENCY
IN ACTION
With our new
eco-efficient solution.
KALMAR

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

Match fuel consumption to productivity needs.

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 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.

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.

Kalmar Eco Reachstacker

Typical operating data for 2000 hours of operation.

Gallons of fuel	**8,789**
USD	**28,915**
Tons of CO_2	**98**

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.

	5 year old machine	10 year old machine
Gallons of fuel	**10,849**	**12,454**
USD	**35,693**	**40,973**
Tons of CO_2	**121**	**138**

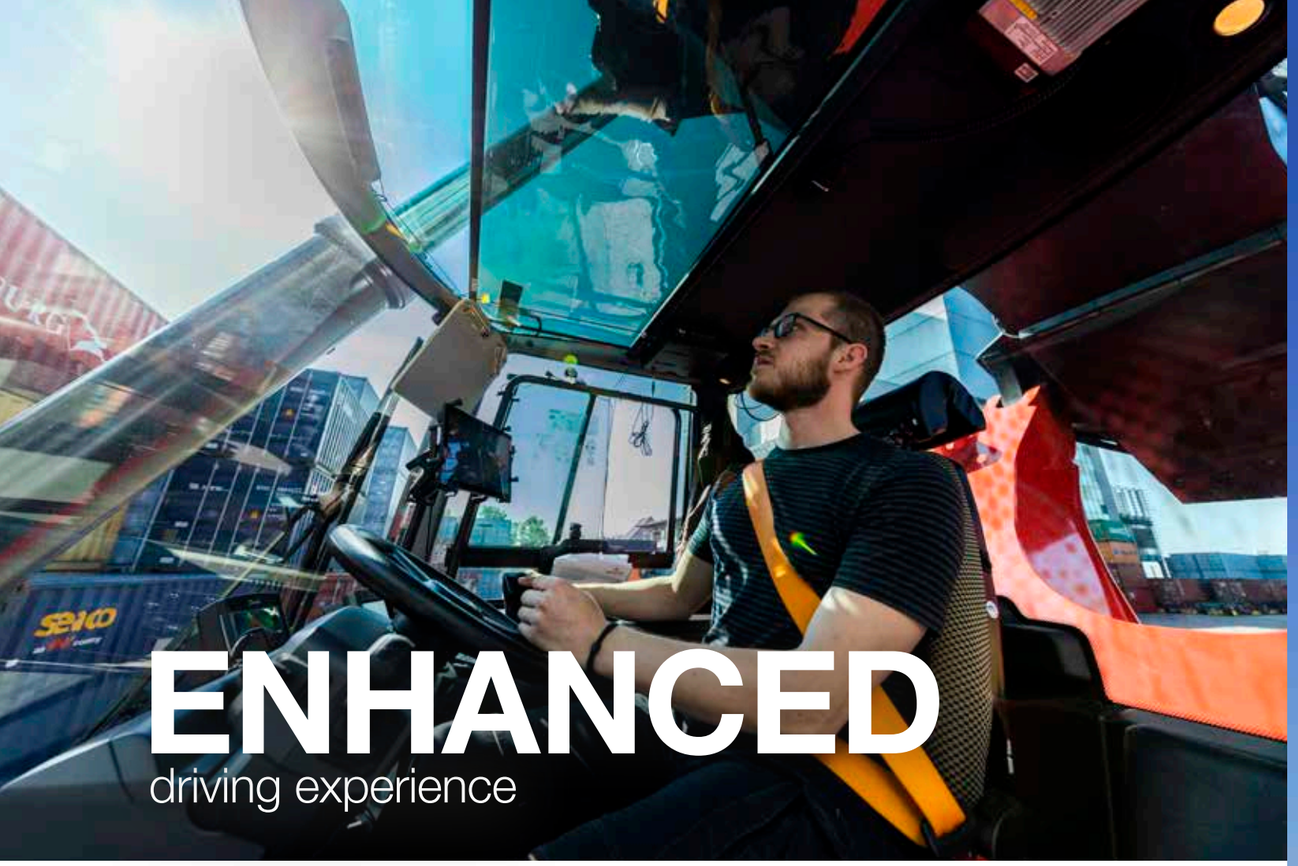
Calculations and assumptions: Fuel consumption data has been collected over a six month period using Kalmar Insight with an Eco Reachstacker, a 5 year old and a 10 year old reachstacker operating normally, with comparable idling time. We have used the following metrics for these calculations: 2000 operating hours per year, fuel at $3.29 per gallon and 22 lbs of CO_2 being produced per gallon of fuel used.

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-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 4.1 to 3.4 gal/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.



ENHANCED
driving experience

Increased safety and efficiency.
The Kalmar Eco Reachstacker uses a combination of a continuous variable and a hydro-mechanical 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 cab. With slim line a-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 cab, 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 optimize their driving performance and what needs to be checked on the machine every day.

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

REDUCE
your emissions further

HVO100 fuel can reduce the emissions of Kalmar Eco Reachstackers by up to 90%, making them one of the most eco-efficient reachstackers available 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 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 as well as fuel consumption.

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.

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.

More

CHOICE

Handle bulk materials with ease.
Our range of Eco Reachstackers can be fitted with a titling spreader that allows you to handle containerized bulk materials easily. With the ability to tilt lengthwise 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 70,000 lbs in tilt mode and 99,000 lbs 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. This 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.

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

SUPPORT

when and where you need it

Our job doesn't stop once we deliver your new Eco 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 ia available as an option for 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-450SE (S = Container - Top Lift)
Kalmar DRG 450C-450CE (C = Intermodal - Combi Lift)
Kalmar DRG 500A-600AE (A = Industrial - Tool Carrier)
Kalmar DRG 570Z-700ZE (Z = Industrial - 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 complete 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)
- Drive and steer tires 18.00x25"/PR40 (6x)
- Drive and steer tires 18.00x33"/PR36 (6x), for larger models with higher lift capacity

Drive Train
- Volvo D8 in EU stage 3A (EPA Tier 3)
- Volvo D8 6-cylinder diesel engines with pre-heater, displacement 7.7 L only
- High power & torque with low fuel consumption
- Engine monitoring and protection system
- Automatic HVT 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
- Auto stop function, engine shut down after 10 sec, when parking brake is on.

Load-Sensing Hydraulics
- Load-sensing lift hydraulics, spreader and steering, with 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 by-pass (5 mµ)
- Servo filter for the work hydraulics (10 mµ)
- Pressure filter for the brakes (10 mµ)
- Regeneration high-speed lifting & extension
- Boom end-damping (in-out/up-down/20-40')
- 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 (2,5x0,76 m) & 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 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 = ±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 cab
- 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)

Cab (EGO)
Structure
- Spacious, modern cab with best ergonomics
- Large windows, good visibility, in all directions
- Manual moveable cab (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, 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
- 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
- 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)

Operator menu:
- System voltage
- Engine rpm
- Traveling speed (km/h or mph)
- 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 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

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

Chassis
- DRG range in Toplift (S), Intermodal (C) and Industrial handlings (A + Z)
- Wheelbases in 236" - 295"
- Duplex 2-stage booms for S+C+A+Z (H4 = 512" - 700")

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 spacer (reduces tire wear)

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

Drive train
- Volvo TAD-853-VE, 6-inline, 315 hp, 966 lb-ft (EU 3A / EPA Tier 3)
- Volvo TAD-873-VE, 6-inline, 315 hp, 966 lb-ft (Stage 4 / Tier 4F)
- Auto Start/Stop function to save fuel
- Automatic engine and ignition stop at idle
- Pre-cleaner air intake with raised air intake
- Various programmable speed limitations

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")

Attachment
- Tilt function ±5 deg (FWD/REV), with tilt lock & speed limit 3mph
- Hydraulics Pile Slope HPS ±5 deg (side tilt), with tilt lock & speed limit 3mph
- Rotations stop spreader at ±25 deg (with override switch)
- Automatic extension 20'-40' with 30' stop
- Overheight folding legs OFL = 63" or 79" (integral)
- Boom nose extension L = 39" or 63"
- Long boom nose, extension = 63"
- 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" extension (noise reduction)
- Extended twistlocks 11.8"
- Bulk handling spreader for 0-55 degrees sideways tilt (20'-40')
- Bulk handling spreader for 0-55 degrees lengthwise tilt (20')
- Side door opener for tilting spreader
- Hatch door opener for tilting spreader
- Container shaker function for tilting spreader
- Coil ram sub frame, STD, 77,000 lbs, ID / OD = 20"/118"
- Coil ram sub frame, Tool Carrier, 77,000 lbs, ID / OD = 20"/118"

Electrical System 24V
- Radio with CD/MP3/BT
- Extra sockets 2x24V + 2x12V in cab door columns
- Extra sockets 2x24V + 2x5V USB's in cab door columns
- Electric air pressure horn
- Height limitation system for lifting boom
- Load center limitation for lifting boom
- Speed limitation, please specify km/h
- Container lights, LED 4x, on front 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, with 4x sensors, TV-camera & monitor
- Tire pressure monitoring system (Bluetooth)
- Cab heater with 220V outlet
- Diesel powered cab heater 5 kW
- Alcolock Draeger in cab

Cab (EGO)
Structure
- Hydraulic sliding cab (stroke 93"), anti-collision function, avoid container / trailer to hit cab in front position
- Speed limitation depending on cab position
- Hydraulic elevating cab (stroke 90")

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 with 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 with switch for forward/reverse
- Mini-wheel steering with switch for forward/reverse
- G-Generation joystick - EGO

Climate
- Sun visor front-roof-rear windows (of black net)
- Sun visor roof window (of reflecting film)
- Microfilter in additional to std 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, will not go in gear unless seatbelt is on
- Semi-automatic fire suppression system
- Tool kit
- Extra sound insulation - reduction 3 dB(A)
- Lockable fuel cap
- Central greasing (base truck / spreader)
- Filter kit 2000 hrs

Fleet Management
- Kalmar Insight license (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"
- Documentation on cd or memory stick

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

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

DRIVELINES

		Eco Reachstacker	
Engine emission approvals		**Tier 3***	**Tier 4F**
Engine brand / series		Volvo D8	Volvo D8
Engine model		TAD-853-VE	TAD-873-VE
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
DEF consumption – average	(%)	-	3 - 7
Transmission model		Dana - HVT R2-851/73	
Gearbox, type		Hydrodynamic Automatic (Power-shift)	
Transmission clutch type		Hydrostatic	
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)	3080 W AC	3080 W AC

* 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

Intermodal Handling - Top Lift and Trailer Lift

Industrial Handling - Tool Carrier

Industrial Handling - Lift Hook

Industrial Handling - Tilting Spreader

Industrial Handling - Coil Hook

CONTAINER HANDLING

				DRG420-60S5E	DRG450-60S5E	DRG450-60S5XE	DRG450-65S5E	DRG450-65S5XE	DRG450-65S5XSE	DRG450-65S6E	DRG450-65S6XE
MAIN DATA	**Type of handling**			Container handling		Container handling					
	Lift capacity, row 1-2-3-4	Q1 - Q2 - Q3 - Q4	(klbs)	92-55-26	99-59-28	99-77-39	99-70-35	99-83-46	99-83-46	99-70-35-19	99-83-46-26
	Lift capacity, row 1-2-3-4 (including jacks)	Q1 - Q2 - Q3 - Q4	(klbs)	-	-	-	-	-	99-90-63	-	-
	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	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
	Load center, from front face of tires, row 1-2-3-4	L4 - L5 - L6 - L7	(in)	77-150-249	77-150-249	73 -150-249	77-150-249	73 -150-249	73 -150-249	89 -150 - 249 - 347	85 -150 - 249 - 347
	Lost load center, to front face of tires	X	(in)	33	33	37	33	37	37	33	37
	Wheelbase	L3	(in)	236		236	256	256	256	256	256
WEIGHTS	**Service weight, standard truck**		(lbs)	144405	148590	170860	153220	170415	177030	155425	170860
	Axle load, front at load center L4, unloaded - loaded		(lbs)	76060-211865	76280-221785	78485-223990	77160-219140	79365-221345	84880-226855	79365-225975	80470-227075
	Axle load, front at load center L5, unloaded - loaded		(lbs)	85760-183645	85980-191580	88625-226855	85980-207015	88845-233690	94360-239420	87080-208115	88625-233470
	Axle load, rear at load center L4, unloaded - loaded		(lbs)	68345-25135	72310-26015	92375-46075	76060-33290	91050-48280	92155-49385	76060-28660	90390-42990
	Axle load, rear at load center L5, unloaded - loaded		(lbs)	58645-15875	62610-16535	82230-21165	67240-16755	81790-20505	82675-21385	68345-17855	82230-21165
WHEELS	**Tires, dimension, PLY rating, star rating [1]**			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 25", PR36, E4
	Tire pressure (front - rear)		(psi)	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
DIMENSIONS	**Boom angle, min - max**		(deg)	0-60		0-60	0-60	0-60	0-60	0-62	0-63
	Boom height, min - max	H3 - H5	(in)	181-717		185-720	181-717	185-720	185-720	177-758	181-762
	Chassis height - top of boom fixation, max	H2	(in)	155		158	155	158	158	155	158
	Lift height, min-max in twistlocks, row 1	H4	(in)	594		598	594	598	594	638	642
	Boom reach stroke		(in)	276		276	276	276	276	303	303
	Truck height - seat height	H6 - H8	(in)	181-101		185 -105	181-101	185 -105	185-101	177-101	181-105
	Overall truck length, without - with boom	L	(in)	441		441	461	461	461	472	472
	Truck width over drive axle	B	(in)	163		163					
	Spreader sideshift	V1	(in)	+/-31.5 (63)		+/-31.5 (63)					
	Spreader rotation		(deg)	+195/-105		+195/-105					
	Ground clearance		(in)	10		12	10	12	12	10	12
	Aisle width with 20'-40' container	A1 - A2	(in)	441-535		441-535	457-535	457-535	457-535	469-547	469-547
	Turning radius, outer with 20'-40' container	R1 - R3	(in)	319-370		319-370	335-370	335-370	335-370	335-372	335-372
DRIVE LINE	**Travel speed, fwd unloaded - rated load / rev unloaded - rated load, max**		(mph)	17-14 / 11-11		17-14 / 11-11					
	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, max		(lbf)	56200		56200					
OTHER	**Tank volumes of working oil & brake oil**		(gal)	195 (158+37)		195 (158+37)					
	Working pressure boom/spreader, max		(psi)	3335 / 2320		3335 / 2320					
	Noise level LpAZ (EN12053), inside cab[2]		(dB(A))	68-70		68-70					
	Noise level LpAZ (2000/14/EC), outside cab[2]		(dB(A))	103-106		103-106					

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

CONTAINER HANDLING

				DRG450-65S6HE	DRG450-65S6HXE	DRG450-65S6HXSE	DRG450-70S5XE	DRG450-70S5XSE	DRG450-70S6HXSE	DRG450-75S5XSE	DRG450-75S6HXSE
MAIN DATA	**Type of handling**				Container handling				Container handling		
	Lift capacity, row 1-2-3-4	Q1 - Q2 - Q3 - Q4	(klbs)	99-72-39-22	99-85-46-28	99-85-46-28	99-90-50	99-90-50	99-90-50-30	99-99-57	99-99-59-37
	Lift capacity, row 1-2-3-4 (including jacks)	Q1 - Q2 - Q3 - Q4	(klbs)	-	-	99-90-63-39	-	99-90-68	99-90-68-41	99-99-74	99-99-77-50
	Stacking capacity, in container row 1-2-3-4 of 8'6" / 9'6"			6/6-6/5-5/4-4/3	6/6-6/5-5/4-4/3	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	6/6-6/5-5/4-4/3
	Load center, from front face of tires, row 1-2-3-4	L4 - L5 - L6 - L7	(in)	117-150-249-347	113-150-249-347	113-150-249-347	73-150-249		113-150-249-347	73-150-249	113-150-249-347
	Lost load center, to front face of tires	X	(in)	33	37	37			37		
	Wheelbase	L3	(in)		256		276	276	276	295	295
WEIGHTS	**Service weight, standard truck**		(lbs)	162040	181880	184085	173725	177030	186070	181660	190480
	Axle load, front at load center L4, unloaded - loaded		(lbs)	85980-243170	91490-248680	93695-250885	82675-221565	85980-224870	93915-246915	88185-224430	96785-246255
	Axle load, front at load center L5, unloaded - loaded		(lbs)	90390-215170	96560-245375	98765-247580	91490-243170	94800-246475	98545-250225	96560-258600	101415-263450
	Axle load, rear at load center L4, unloaded - loaded		(lbs)	76060-18080	90390-32410	90390-32410	91050-51370	91050-51370	92155-38360	93475-56440	95460-45195
	Axle load, rear at load center L5, unloaded - loaded		(lbs)	71650-19620	85320-22485	85320-22485	82230-20945	82230-20945	87525-26235	85100-22265	91050-28220
WHEELS	**Tires, dimension, PLY rating, star rating [1]**			18 x 25", PR40, E4	18 x 33", PR36, E4	18 x 33", PR36, E4	18 x 33", PR36, E4				
	Tire pressure (front - rear)		(psi)		145-145		145-145				
	Track width (front - rear)	S1 - S2	(in)	119-102	119-110	119-110	119-110				
DIMENSIONS	**Boom angle, min - max**		(deg)	0-62	0-62	0-63	0-60	0-60	0-63	0-58	0-61
	Boom height, min - max	H3 - H5	(in)	181-819	185-823	185-823	185-720	185-720	185-823	187-724	187-827
	Chassis height - top of boom fixation, max	H2	(in)	155	158	158	158				
	Lift height, min-max in twistlocks, row 1	H4	(in)	697	701	701	594	594	701	598	701
	Boom reach stroke		(in)		335		276	276	335	276	335
	Truck height - seat height	H6 - H8	(in)	181-101	185-105	185-105	185-105				
	Overall truck length, without - with boom	L	(in)		500		480	480	520	500	539
	Truck width over drive axle	B	(in)		163		163				
	Spreader sideshift	V1	(in)		+/-31.5 (63)		+/-31.5 (63)				
	Spreader rotation		(deg)		+195/-105		+195/-105				
	Ground clearance		(in)	10	12	12	12				
	Aisle width with 20'-40' container	A1 - A2	(in)	480-559	480-559	480-559	476-535	476-535	500-559	492-535	516-559
	Turning radius, outer with 20'-40' container	R1 - R3	(in)	335-372	335-372	335-372	354-370	354-370	354-372	370-370	370-372
DRIVE LINE	**Travel speed, fwd unloaded - rated load / rev unloaded - rated load, max**		(mph)		17-14 / 11-11				17-14 / 11-11		
	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, max		(lbf)		56200				56200		
OTHER	**Tank volumes of working oil & brake oil**		(gal)		195 (158+37)				195 (158+37)		
	Working pressure boom/spreader, max		(psi)		3335 / 2320				3335 / 2320		
	Noise level LpAZ (EN12053), inside cab [2]		(dB(A))		68-70				68-70		
	Noise level LpAZ (2000/14/EC), outside cab [2]		(dB(A))		103-106				103-106		

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

INTERMODAL HANDLING

				DRG450-60C5E	DRG450-60C5XE	DRG450-65C5E	DRG450-65C5XE	DRG450-65C5XSE	DRG450-70C5XE	DRG450-70C5XSE	DRG450-75C5XSE
MAIN DATA	**Type of handling**			Intermodal handling		Intermodal handling					
	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	99-83-44	99-83-44	99-94-52
	Lift capacity, row 1-2-3 / load center L4-L8[1]	Q1 - Q2 - Q3 - Q4 - Q5	(klbs)	-	-	-	-	99-83-52	-	99-83-59	99-99-70
	Stacking capacity, in container row 1-2-3 of 8'6" / 9'6"			5/5-5/4-4/3		5/5-5/4-4/3					
	Load center, from front face of tires	L4 - L5 - L6 - L7 - L8 including jacks	(in)	77-150-249	73-150-249	77-150-249	73-150-249	73-150-249	73-150-249	109-154-253-351	109-154-253-351
	Lost load center, to front face of tires	X	(in)	33	37	33	37	37	37	37	37
	Wheelbase	L3	(in)	236	236	256	256	256	276	276	295
WEIGHTS	**Service weight, standard truck**		(lbs)	162040	180340	163360	179235	184085	183645	186950	194890
	Axle load, front at load center L4, unloaded - loaded		(lbs)	90390-235895	92595-238100	91710-233690	93475-235455	98105-240085	95900-234790	99210-238100	101415-237660
	Axle load, front at load center L5, unloaded - loaded		(lbs)	102955-200840	105820-232365	103395-209220	105820-235455	110670-240305	107585-248240	110890-251545	112435-267200
	Axle load, rear at load center L4, unloaded - loaded		(lbs)	71650-25355	87745-41445	77605-28880	85760-42990	85980-43210	87745-48060	87745-48060	93475-56440
	Axle load, rear at load center L5, unloaded - loaded		(lbs)	59085-16315	74515-18520	59965-15875	73415-18740	73415-18740	76060-19180	76060-19180	82455-22485
WHEELS	**Tires, dimension, PLY rating, star rating [2]**			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 33", PR40, E4	18 x 33", PR40, E4	18 x 33", PR40, E4
	Tire pressure (front - rear)		(psi)	145-145		145-145	145-145	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	119-110	119-110	119-110
DIMENSIONS	**Boom angle, min - max**		(deg)	0-60		0-60	0-60	0-60	0-60	0-60	0-58
	Boom height, min - max	H3 - H5	(in)	181-717	185-720	181-717	185-720	185-720	185-720	185-720	187-724
	Chassis height - top of boom fixation, max	H2	(in)	155	158	155	158	158	158	158	158
	Lift height, min-max in twistlocks, row 1	H4	(in)	587	591	587	591	587	587	587	591
	Boom reach stroke		(in)	276	276	276	276	276	276	276	276
	Truck height - seat height	H6 - H8	(in)	181-101	185-105	181-101	185-105	185-105	185-105	185-105	187-105
	Overall truck length, without - with boom	L	(in)	441	441	461	461	461	480	480	500
	Truck width over drive axle	B	(in)	163		163					
	Spreader sideshift	V1	(in)	+/-31.5 (63)		+/-31.5 (63)					
	Spreader rotation		(deg)	+195 / -105		+195 / -105					
	Ground clearance		(in)	10	12	10	12	12	12	12	12
	Aisle width with 20'-40' container	A1 - A2	(in)	441-535	441-535	457-535	457-535	457-535	476-535	476-535	492-535
	Turning radius, outer with 20'-40' container	R1 - R3	(in)	319-370	319-370	335-370	335-370	335-370	354-370	354-370	370-370
DRIVE LINE	**Travel speed, fwd unloaded - rated load / rev unloaded - rated load, max**		(mph)	17-14 / 11-11		17-14 / 11-10					
	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, max		(lbf)	56,200		56200					
OTHER	**Tank volumes of working oil & brake oil**		(gal)	195 (158+37)		195 (158+37)					
	Working pressure boom/spreader, max		(psi)	3335 / 2320		3335 / 2320					
	Noise level LpAZ (EN12053), inside cab[3]		(dB(A))	68-70		68-70					
	Noise level LpAZ (2000/14/EC), outside cab[3]		(dB(A))	103-106		103-106					

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

INDUSTRIAL HANDLING

				DRG500-60A5E	DRG540-60A5XE	DRG540-65A5XE	DRG540-65A5XSE	DRG600-75A5XE	DRG600-75A5XSE	DRG570-65ZE	DRG600-65ZXE	DRG600-65ZXSE	DRG700-75ZXE	DRG700-75ZXSE
MAIN DATA	**Type of handling**			Tool carrier			Tool carrier			Lifting hook				
	Lift capacity, row 1-2-3 / load center L4-L8 [1]	Q1 - Q2 - Q3 - Q4 - Q5	(klbs)	110-59-35-24	119-72-44-30	119-83-55-37	119-83-55-37	132-99-63-46	132-99-63-46	125-119-68-41-30	132-132-83-55-39	132-132-83-55-39	154-132-99-66-48	154-132-99-66-48
	Lift capacity, row 1-2-3 / load center L4-L8 [1]	Q1 - Q2 - Q3 - Q4 - Q5	(klbs)	-	-	-	119-99-74-50	-	132-110-83-59	-	-	132-132-99-74-52	-	154-132-110-85-61
	Stacking capacity, in container row 1-2-3 of 8'6" / 9'6"													
	Load center, from front face of tires	L4 - L5 - L6 - L7 - L8 including jacks	(in)	79-157-236-315-394			79-157-236-315-394			59-79-157-236-315				
	Lost load center, to front face of tires	X	(in)	33	37	37		37		33	37	37	37	37
	Wheelbase	L3	(in)	236	236	256	256	295	295	256	256	256	295	295
WEIGHTS	**Service weight, standard truck**		(lbs)	138890	160055	163140	167990	169755	171960	134700	156310	158955	163140	165345
	Axle load, front at load center L4, unloaded - loaded		(lbs)	65035-226635	65255-239865	68345-241625	73195-246475	75400-261690	77605-261690	57320-228180	60185-252650	62390-254855	67460-271830	69665-274035
	Axle load, front at load center L5, unloaded - loaded		(lbs)		-			-				-		
	Axle load, rear at load center L4, unloaded - loaded		(lbs)	73855-22485	94800-35935	94800-40565	94800-40565	94360-42550	94360-42550	77380-32185	96120-35935	96120-35935	95680-45635	95680-45635
	Axle load, rear at load center L5, unloaded - loaded		(lbs)		-			-				-		
WHEELS	**Tires, dimension, PLY rating, star rating [2]**			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	18 x 33", PR36, E4	18 x 33", PR36, E4
	Tire pressure (front - rear)		(psi)		145-145			145-145				145-145		
	Track width (front - rear)	S1 - S2	(in)	119-102	119-110	119-110	119-110	119-110	119-110	119-102	119-110	119-110	119-110	119-110
DIMENSIONS	**Boom angle, min - max**		(deg)		0-60		0-60	0-58	0-58		0-60		0-58	0-58
	Boom height, min - max	H3 - H5	(in)	181-717	185-720	185-720	185-720	187-724	187-724	181-717	185-720	185-720	187-724	187-724
	Chassis height - top of boom fixation, max	H2	(in)	155	159	159	159	159	159	155	159	159	159	159
	Lift height, min-max in twistlocks, row 1	H4	(in)		-			600				606		
	Boom reach stroke		(in)		276			276				276		
	Truck height - seat height	H6 - H8	(in)	181-101	185-105	185-105	185-105	185-105	185-105	185-101	185-105	185-105	187-105	187-105
	Overall truck length, without - with boom	L	(in)	425	425	445	445	484	484	429	429	429	469	469
	Truck width over drive axle	B	(in)		163			163				163		
	Spreader sideshift	V1	(in)		+/-17.7			+/-17.7		-	–	–	-	-
	Spreader rotation		(deg)		+195 / -105			+195 / -105				360 endless		
	Ground clearance		(in)		12			12			12		12	12
	Aisle width with 20'-40' container	A1 - A2	(in)		-		–	-	-	-	-	-	-	-
	Turning radius, outer with 20'-40' container	R1 - R3	(in)	319	319	335	335	370	370	370	490	490	370	370
DRIVE LINE	**Travel speed, fwd unloaded - rated load / rev unloaded - rated load, max**		(mph)		17-14 / 11-11			17-14 / 11-11				17-3 / 11-3		
	Lifting speed, unloaded - 70% of rated load		(fps)		1.38-0.79			1.38-0.79				1.38-0.72		
	Lowering speed, unloaded - rated load		(fps)		1.18-1.18			1.18-1.18				0.66-1.18		
	Drawbar pull, max		(lbf)		56200			56200				56200		
OTHER	**Tank volumes of working oil & brake oil**		(gal)		195 (158+37)			195 (158+37)				195 (158+37)		
	Working pressure boom/spreader, max		(psi)		3335 / -			3335 / -				3335 / -		
	Noise level LpAZ (EN12053), inside cab [3]		(dB(A))		68-70			68-70				68-70		
	Noise level LpAZ (2000/14/EC), outside cab [3]		(dB(A))		107-110			107-110				107-110		

1. Rows for Intermodal handling / Load center for Industrial handling
2. 4 + 2 pneumatic / diagonal tires
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