

Expect more.



The Kalmar DCG80-100
Empty Container Handler range.



More for you.

Our new range of Kalmar empty container handlers offer you more than they ever have before, which means you get more for your money.

You get more choice of machines, with a range of single and double container stackers in 8, 9 or 10 tonne capacities. A greater choice of drive lines and performance levels that you can match to your individual needs. More comfort for your drivers, as all of our new range comes with our state of the art EGO Cabin, which, can be situated in either a high or low position on the chassis.

A more robust and efficient range, with the highest lifting and lowering rates and dramatically reduced running costs per move. Plus easier access for service and maintenance and more options across the whole range to choose from than ever before.

No matter what way you look at it, the new range of Kalmar empty container handlers give you more.

more
for you.

The operability and control of the Kalmar empty container handler is extremely good. It's agile, suitable for any empty container yard.

Zhang Lin, Operator at NingBo Beilun International Container Terminals Ltd.



To us, Kalmar offers the best machines. It's the safest truck we've used. Kalmar also offers excellent service support.

He Jianguo, Container Handler Unit leader, G-Fortune (Ningbo) Company.



90%
of our
customers
would
repurchase.

Expect nothing less.

With nearly 10,000 empty container handlers built to our high standards over the last 30 years, it's no surprise that 1000's of them are still in operation today. In fact over 90% of our customers say they would repurchase a Kalmar empty container handler again, primarily for their superior durability and reliability and the local Kalmar support and service network.



You can expect more across the entire range.

more options.

Now more safety features and options to customise your machine than ever before. From reverse warning systems to a range of different drive lines and spreaders.

more return.

Higher productivity with lower fuel consumption means a lower cost per move. Longer servicing intervals with easier access for service and maintenance, saving you time and money. Plus, the highest re-sale values in the market.

more robust.

Built on our proven G-Generation platform you get a stronger chassis with high and rear mounted cylinder package for improved stability and toughness. You also get upgraded drive axles with oil-cooled Wet Disc Brakes and a wider rear steer for greater stability when lifting heavy loads to heights.



Double stackers, up to 10 tonnes, high mounted cabin.

more choice.

You can choose from either a single or double stacker models with three different lifting capacities each. There are two different types of cabins that can be mounted in either a high or low position, four spreader options and four different lifting heights to choose from for both the single and the double stackers.

more efficient.

Proven, powerful yet efficient drive lines in both medium and high performance versions with 3 or 4 speed manual transmissions and a choice of engines that meet both the EU Stage 3 and 4 as well as EPA Tier 3 and 4 Emissions Standards. With the added efficiency of standard load sensing hydraulics and a choice of options for greater fuel efficiency including Eco Drive Modes, Stop/Start technology and Tyre Pressure Monitoring.



Single stackers, up to 10 tonnes, low mounted cabin.

more comfort.

New EGO cabin with multi-functional joystick or linear lift levers, advanced ergonomics and improved visibility in all directions, including the corner castings and upwards. Plus, a new tilt cylinder design for greater driver stability and control.

More choice.

Choose from six different machines depending on your needs.

The Kalmar DCG 80-100 Empty Container Handler range.

You can choose three different lifting capacities, either 8, 9 or 10 tonnes depending on your business needs.

Each of these different lifting capacities can then be coupled with either a single or double container handler. Giving you three different lifting capacities to choose from and two stacking modes.

A choice of lifting heights.

We have four different mast heights to choose from, which give you the ability to stack up to 8 high. You can choose from 5/5 up to 8/7 mast heights for containers sized 8ft6/9ft6. You can expect to go one container higher with our double stackers as you are able to carry your containers 1+1.

A choice of spreaders.

The first thing you need to do is know what sort of containers you will be handling, then you can decide what sort of lifting head you will need on your single or double spreader.

For single stacker spreaders you can choose from lifting heads with either standard twistlocks for ISO containers or ones that have a wide twistlock position for both ISO and wide body containers.

For double stacker spreaders you can choose from lifting heads with lift hooks and hydraulic side clamps to handle one or two standard 20-40ft containers. Or for bigger containers you can choose a lifting head with additional safety wedges that can lock in single containers and handle containers greater than 45ft in length.

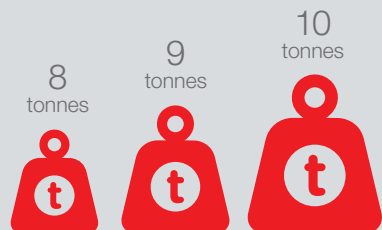
A choice of end beam levellers.

Each of our new machines comes with spreader end beams with a 250mm levelling stroke on both sides of the lift head to make for safer loading of containers onto tilting trailers. This is done through a Mechanical Pile Slope.

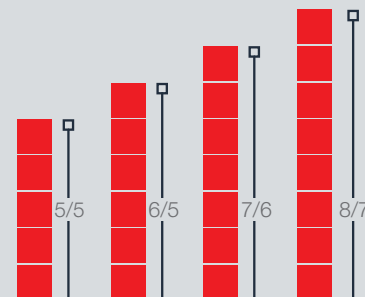
If you require additional levelling capabilities you can choose a Hydraulic Pile Slope, which will give you an additional +/- 5 degrees above the standard 250mm levelling stroke. This system provides for a safer and smoother levelling when loading containers onto tilting trailers.



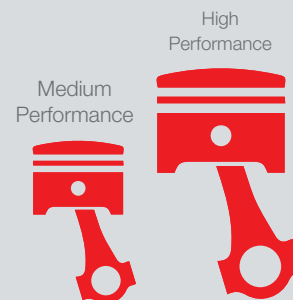
3 lifting capacities.



4 lifting heights.



2 performance alternatives.



Extra comfort, extra smart.

Every member of our complete empty container handler range comes fitted with our new EGO cabin, the ultimate operating environment for your driver.

With a more ergonomic design, smarter functions and an intuitive workspace than ever before, you can expect to get more from your operators.

More to see: With A-posts being replaced with slim B-posts you can expect greater visibility in all directions: forwards, backwards, to the side and upwards. Our new dual wiper system cleans a bigger area of the front windscreen than before so your forward view will stay extra clean and clear at all times.

Extra easy to operate: With a new joystick, electronically adjustable work console and side tilt steering wheel they are all designed to minimise driver fatigue and maximise operational efficiency.

More comfortable: With an adjustable drivers seat, a new fault safe pedal system and a new Climate Control system with smarter controls your operator will benefit from improved ventilation heating and cooling, plus a cabin with superior interior comfort.

Extra smart: Our new user interface combines sight, sound and touch to create a perfectly balanced operating environment with a new colour display at its heart. Advanced diagnostics allows for greater operational control and safety.



More efficient.

More choice of drive lines.

You can choose from either Medium Performance (MP) or High Performance (HP) drive lines. The MP engine and transmission combination can handle most day-to-day applications. However, if you need that extra power and faster lifting speed, then the HP combination might be more suitable. Both options come with Eco Drive Modes with three different operating modes.



Engine Power

Medium Performance:
160-170 kW (max 2100 rpm)

High Performance:
180-190 kW (max 1800 rpm)



Engine Torque

Medium Performance:
900-1100 Nm

High Performance:
1100-1200 Nm



Transmission

Medium Performance:
3+3 gears (no lock-up)

High Performance:
4+4 gears (with lock-up)



Lift & lowering speeds

Medium Performance:
MP 0,55-0,50↑ / 0,50-0,60 m/sec↓

High Performance:
HP 0,65-0,60↑ / 0,55-0,60 m/sec↓

More performance on demand.

Our entire range of empty container handlers comes with ECO-Drive modes, giving you three different power modes to choose from.

Power Mode: when speed 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: when you need to retain some speed. With a slightly reduced engine speed you can expect 5-15% lower running and fuel costs.

Economy Mode: when you need the lowest running costs. With engine speed reduced even further you can expect 10-25% lower running and fuel costs.

Normal Mode.
Save **5-15%**
in running costs.

Economy Mode.
Save **10-25%**
in running costs.

more
efficient.



More 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 utilises multiple spray nozzles that release a high pressure water mist where the fire has been detected from a re-chargable water 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.



Cabin options. Depending on your specific needs you can choose from a low or high mounted cabin (+600mm). High cabins provide better visibility for the driver particularly when working with two containers or on high stacks.



Reverse Beeper System. When your staff are working side by side with moving vehicles there is always a safety risk. Installing a reverse beeper system provides a clear acoustic alert when the machine is reversing so personnel can make sure that they are out of harm's way at all times.



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



Additional lighting. Extra lighting, particularly if you have to 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 in specific positions:

- 2 or 4 on the front mud guards
- 2, 4, 6 or 8 on the cabin roof
- 2 on the lift mast
- 2 on the spreader carriage
- 2 rear reversing lamps.





more
value.

More value.

Being the most reliable and robust range of empty container handlers in the market can give you real advantages, like higher uptime and lower total running costs.

Higher resale values.

With over 10,000 machines built to the high standard you expect from us - Kalmar empty container handlers are known for their reliability and durability which is why they demand the highest resale values in the market.

Lowering operating costs.

You get longer servicing intervals than before so you can keep your machine hard at work for longer. Plus, with the addition of advanced diagnostic tools and monitoring systems, faults can be dealt with quickly, thereby reducing any downtime.

Higher uptime, lower costs per move and high re-sale values means you can expect one thing; the best lifetime value you can expect of any empty container handler.

Safer to operate.

With a clearer view forward, backwards and upwards, a new ergonomically designed cabin, non-slip access surfaces with supporting handrails, plus numerous safety options to choose from including our Reverse Warning System, Alco-Lock and four overload alerts you can be sure that your operator is working in a safe environment.



More support.

Our job doesn't stop once we deliver your new empty container handlers. We can also offer a range of support services that help keep your new equipment running at its optimal best. With a global network of over 1500 service and support staff, in 120 countries we will always have someone nearby to give you the support you need.

Kalmar Care, making sure your business never stops.

We can offer you four different types of service and maintenance contracts, for any brand of equipment, for you to choose from. Each is designed to help you improve your operational efficiency, drive productivity and secure financial predictability. Each contract type includes a set of standardised service modules to choose from to meet your business's needs. You just need to choose which one is right for you and your day-to-day operations. Here is an overview of the four different levels:



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
- Addition of 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.

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

Kalmar Optimal Care

We optimise your business performance.

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

Optimise your operations with SmartFleet.

SmartFleet is a powerful equipment optimisation tool that can help you get more from your fleet. Data is streamed directly from your equipment, analysed and then displayed in an accessible and easy to use graphic interface. You will be able to assess the equipment's key performance data and make suitable changes to your operation processes to improve both efficiency and productivity.

Kalmar SmartFleet enables you to more effectively manage your container handling operations, decreases downtime and can help improve safety at your site.



more intelligent.

Kalmar Genuine Parts.

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 you can do just that. Kalmar Parts Care can make 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 individual needs, so talk to us today and see how we can lift your parts availability, while reducing your inventory costs.



Financing options for you.

Lease or rent.

You may choose to buy your new empty container handler outright or consider leasing or renting your equipment. Kalmar 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. With our leasing packages you can focus on your core operations, while we perform all your service and maintenance needs required by your fleet. You just need to choose which leasing package and level of service and maintenance support is right for your business. Kalmar can also look at you trading-in your old equipment.

No matter what your service and support needs are, make sure that you speak to your local Kalmar team first.

Kalmar Training Academy.

Our training academy offers a range of courses for both your technicians and operators.

Technicians will be given the knowledge that they need to be able to maintain 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.

Operators will be shown how to get more from their equipment. They will be shown how to improve the efficiency of their driving, what needs to be checked daily before operating and how to get the most out of their new empty container handler.

Standard.

Kalmar DCG80-100

Kalmar DCG80-100, E5-E8 // Empty Container Handlers // 8 - 10 tonnes (EU stage 3A & 4)

Norms, standards and regulations according to:

- Machinery Directive 2006/42/EC
- Safety Industrial Trucks ISO 3691-1 & EN 16307-1
- Safety Low & High Lift Trucks ANSI/ITSDF B56.1
- Stability test Masted Container Handlers EN 10525
- CE-marking for trucks within EU/EEA
- ANSI/ITSDF-marking for North America trucks

Chassis

- Strong, durable heavy-duty chassis for EC-Handlers
- High mounted / rear mounted heavy-duty tilt cylinders
- LHS access stairway, 7x steps and a wide platform
- LHS stairway with safe handrails up to the cabin
- Low cabin mounting (LCM) at the rear of the truck
- Very good rear end visibility of the truck
- Chassis with full access to the drive line
- Easy-to-open drive line cover plates (low noise)
- Lifting eyes and anchor points (front & rear)
- Towing pin (rear - incasted)

Body

- Steps with anti-slip protection
- 2x Rear view mirrors - rear on front mudguards
- Strong and protective mudguards (front & rear)
- Noise insulation kit for the complete truck

Steer Axle (rear)

- Kalmar steer axle mounted dual pivot bearings
- Wide track axle with mechanical side stops (±3 deg)
- El-servo power steering with double acting cylinder
- Steer axle with narrow turning radius

Drive Axle (front)

- Kessler planetary axle with hub reduction and differential
- D81-ND in normal duty for high stability (W=4,05-4,10 m)
- D91-HD in heavy duty for extra high stability (W=4,60 m)
- Strong and powerful oil-cooled Wet Disc Brakes (WDB)
- High pressure filter (10 my) for the brakes (WDB)

Drive Axle on Single Stackers (ES):

- DCG80 ES5/5 - ES8/7: D81-ND axle - width 4,05 m
- DCG90 ES5/5 - ES8/7: D81-ND axle - width 4,10 m
- DCG100 ES5/5 - ES8/7: D91-HD axle - width 4,10 m

Drive Axle on Double Stackers (ED):

- DCG80 ED5/5 - ED6/5: D81-ND axle - width 4,10 m
- DCG90 ED5/5 - ED6/5: D91-HD axle - width 4,10 m
- DCG100 ED5/5 - ED6/5: D91-HD axle - width 4,10 m
- DCG80 ED7/6 - ED8/7: D91-HD axle - width 4,60 m
- DCG90 ED7/6 - ED8/7: D91-HD axle - width 4,60 m
- DCG100 ED7/6 - ED8/7: D91-HD axle - width 4,60 m

Wheels on Single Stackers (ES)

- DCG80 ES: Tyres 12.00x24" (4x + 2x)
- DCG90-100 ES: Tyres 14.00x24" (4x + 2x)

Wheels on Double Stackers (ED)

- DCG80-100 ED: Tyres 14.00x24" (4x + 2x)

Drive Train (CanBus)

- Volvo and Cummins diesel engines (4 or 6 cylinder)
- Emission approval EU3A or EU4 (EPA Tier 3 or 4F)
- 4 and 6-cylinder diesel engines with pre-heater
- High power & torque with low fuel consumption
- Engine monitoring and protection system
- Fully automatic transmission DANA TE-14000
- Transmission monitoring and reverse protection
- Declutch function activated by the brake pressure
- Strong radiators for engine, transmission & brakes
- Muffler and exhaust pipe in stainless steel

Load-Sensing Hydraulics

- Load-sensing variable piston pumps (2x)
- Power-on-demand with high lift & lowering speeds
- Pumps for mast, spreader, brakes & steering
- Vane pumps for brake pressure & oil cooling (2x)
- Return filters for the work hydraulics (2x/10 my)
- Servo filter for the work hydraulics (10 my)

- Pressure filter for hydraulics / brakes (10 my)
- Power steering, power brakes & ORFS-couplings
- Hydraulic tank (380 lit), cooling & breather filter
- Mast tilt angles +3 / -3 deg (FW / BW)

Lift Mast

- Mast design for up to 8-high single & double stacking
- Duplex 2-stage mast with high mounted tilt cylinder
- Strong, durable lift mast, 1 pair of cylinders & chains
- Heavy-duty mast profiles and strong cross members
- Mast with strong mast wheels, bearings & guide pads
- Large diameter shafts / bearing for mast / tilt fixations
- Only 2 oil hoses + 1 el cable over the mast

Lift Carriage

- Carriage with strong wheels, bearings & guide pads
- Large sideshift of ±600 mm (total stroke 1200 mm)
- 2 fixed twistlocks with indication lamps
- Mechanical Pile Slope by gravity (MPS) 250 mm
- The carriage is connected by the 2 lift chains

Attachment (DCG80-100 Single Stacker)

- Side lift with hydraulic extension 20'-40'
- 2 fixed twistlocks with indication lamps
- Large sideshift of ±600 mm (total stroke 1200 mm)
- Spring loaded floating vertical heads (0-250 mm)
- Safety locking, alignment pins & sensors (2x)
- Lowering interrupt sensors for safe handling

Attachment (DCG80-100 Double Stacker)

- Side lift with hydraulic extension 20'-40'
- 2 mechanical lift hooks with 2 hydraulic side clamps
- The 2 lift hooks connects the bottom container (I)
- The 2 side clamps connect upper & bottom containers
- 20ft-40ft containers are locked by the side clamps
- Indication lamps for alignment / locked container (I+II)
- Large sideshift of ±600 mm (total stroke 1200 mm)
- Spring loaded floating vertical heads (0-250 mm)
- Safety locking, alignment pins & sensors (4x)
- Lowering interrupt sensors for safe handling

Electronic System

- Electronic weight scale in main display

Electrical System 24V

- Battery box 2x12V & main power switch
- Electric service box on chassis (LHS)
- 2 working LED-lights on spreader carriage (lift head)
- 2 working LED-lights on spreader on end beams
- 2 working LED-lights on mast
- 2 working LED-lights front on fenders (head beam)
- 2 working LED-lights rear below cabin (in reverse)
- 2 position LED-lights on each side of the truck
- 2 tail / brake LED-lights rear in counter weight
- 4 blinker LED-lights (front - rear / left - right)
- 2 flashing LED-brake lights (when reversing)
- 1 rotating warning LED-beacon

Cabin (EGO)

Structure

- Spacious, modern cabin with good ergonomY level
- Large windows, good visibility, in all directions
- Instep handle (left side)
- Sliding window on both sides
- Doors with air damper and key lock (L + R)
- Tinted laminated windows

Comfort

- Seat Kalmar, mech. spring, high back
- Adjustable armrest (RHS) & 2-point safety belt
- Inside rear view mirror (right side)
- Interior lights with fade away function
- Fully adjustable steering wheel incl tilt function
- Fully adjustable colour display
- Electric adjustable operational console with joystick, operational buttons & armrest (RHS)
- Power steering wheel with steer knob
- Electric horn
- LED background light for buttons & switches

Controls

- Electronic lift levers for mast & spreader functions
- Button for forward-neutral-reverse on 1st lift lever
- Auto rev-up accelerator at lifting / tilting / spreader
- Electric accelerator pedal
- Double brake pedals (L + R)

- Gear lever with electronic hand brake (on/off)
- Automatic gear shifting (P1)
- Multi-function lever LHS (parking brake and gear/ direction switch)
- Combined horn and blinker lever
- Warning - hand brake (on/off) leaving seat
- Hour meter

Climate

- ECH, electronic controlled heating/ventilation
- Fresh air and recirculation filter
- Wipers/washers on front, rear and roof windows
- Interval wiper functions on front, rear and roof
- Tinted windows

Information systems

- Colour display & automatic fault analysis
- Menu control with toggle wheel & push buttons
- Electronic weight scale in display

ECO Drive Modes (EDM):

- Power mode
- Normal mode (default setting)
- Economy mode

Operator menu:

- System voltage
- Actual gear
- Engine rpm
- Travelling speed (km/h or m/h)
- Combined hydraulic and brake oil temperature
- Transmission oil temperature
- Engine oil pressure (Volvo)
- Engine oil pressure only (Cummins)
- Engine coolant temperature
- Clock and date
- Operating time (hours)
- Service time indicator (hours)
- Electronic weight scale functions
- Status of heating system & AC system
- Fuel level (diesel and optional AdBlue)
- Est. operating time before empty tank (hour/min)
- Service indicator
- Container counter with reset function
- Trip computer / statistics

Head-Up display for twistlock indication:

- LED indicators for alignment & container(s)

Various warning lights & signals:

- Charging battery
- Low brake pressure
- Failure indicator
- High engine coolant temperature
- Low engine coolant level (not on Cummins)
- Low engine oil pressure
- Preheating engine
- Transmission oil temperature
- Low fuel level (incl AdBlue)
- Hydraulic and brake oil temperature
- Low washer fluid level

Indicator lamps:

- Head beam
- Direction indication
- Parking brake

Colour

- Cabin: Iron-Grey RAL 7011
- Chassis, tanks & mudguards: Red RAL 3000
- Boom, attachment & axles: Black RAL 7021
- Rims: Iron-Grey RAL 7011

Documentation and Decals

- Load chart diagram inside cabin
- Machine data sign on chassis incl. load chart
- Warning, tyre pressure & oil pressure stickers
- Information & levers/joystick stickers
- Fuse diagram
- Instruction manual
- Maintenance manual
- Spare parts catalogue

Optional.

Kalmar DCG80-100

Kalmar DCG80-100, E5-E8 // Empty Container Handlers // 8 - 10 tonnes (EU stage 3A & 4)

Chassis

Chassis - ES Empty Single Stacker

- DCG 80-45 ES (L3=4550 mm)
- DCG 90-45 ES (L3=4550 mm)
- DCG 100-45 ES (L3=4550 mm)

Chassis - ED Empty Double Stacker

- DCG 80-45 ED (L3=4550 mm)
- DCG 90-45 ED (L3=4550 mm)
- DCG 100-45 ED (L3=4550 mm)

Lift Mast

Lift Mast (single stacker)

- Duplex E5 (5-high 9'6" / 5-high 8'6")
- Duplex E6 (5-high 9'6" / 6-high 8'6")
- Duplex E7 (6-high 9'6" / 7-high 8'6")
- Duplex E8 (7-high 9'6" / 8-high 8'6")

Lift Mast (double stacker)

- Duplex E5 (5+1-high 9'6" / 5+1-high 8'6")
- Duplex E6 (5+1-high 9'6" / 6+1-high 8'6")
- Duplex E7 (6+1-high 9'6" / 7+1-high 8'6")
- Duplex E8 (7+1-high 9'6" / 8+1-high 8'6")

Cabin

Structure

- Low mounted cabin (LCM) with dual access stair-ways & upper platforms
- High mounted cabin (HCM), +600 mm, improved visibility, dual access stairways & upper platforms
- Hydraulic tilting cabin (stroke 10 degrees)
- Globetrotter cabin, +200 mm, ledge mount windows
- Safety cage to protect cabin from falling cargo

Comfort

- Various seat alternatives
- Head rest for the seat
- Armrest with adjustment (LHS)
- Horizontal dampening/suspension of seat
- Extra trainer seat incl 2-p safety belt (LHS)
- Bracket for terminal and monitor (RHS)
- Writing pad, A4 paper box and reading lamp (RHS)
- Extra rear view mirror (inside cabin / left side)

Controls

- Lever steering incl switch for forward/reverse
- Mini-wheel steering incl switch for forward/reverse
- Only second gear activated (P3)
- Safety override for hydraulic functions (by code)

Climate

- Electronic Climate Control (ECC)
- Microfilter in additional to std filter
- AC/ECC switched off when door is open
- Sun visor front window (black net)
- Sun visor roof window (black net)
- Sun visor rear window (black net)
- Sun visor roof window (reflective film)
- Extra cabin heater (incl. 1 x 220V outlet)
- Postheating

Drive Trains

- Cummins QSB-6,7-C220 (EU3A, 164 kW, 949 Nm, 6-cyl, 6,70 Lit) + DANA TE-14300 (3+3 gears)
- Volvo TAD-850-VE (EU3A, 160 kW, 1060 Nm, 6-cyl, 7,70 Lit) + DANA TE-14300 (3+3 gears)
- Volvo TAD-572-VE (EU4, 160 kW, 910 Nm, 4-cyl, 5,10 Lit) + DANA TE-14300 (3+3 gears)
- Volvo TAD-851-VE (EU3A, 185 kW, 1160 Nm, 6-cyl, 7,70 Lit) + DANA LTE-14400 (4+4 gears + Lock-Up)
- Volvo TAD-871-VE (EU4, 185 kW, 1160 Nm, 6-cyl, 7,70 Lit) + DANA LTE-14400 (4+4 gears + Lock-Up)

- Auto engine & ignition stop, after 5 min idle
- Air intake filter, with Pre-Cleaner, raised air intake
- Start/stop function (for Volvo engine only)
- Stronger/wider drive axle, Kessler D91, 4500 mm

Hydraulics

- Hydraulic mast accumulator (shock dampening)
- Mast tilt angles +3 / -6 deg (FW / BW)
- Mast tilt angles +2 / -3 deg (FW / BW)
- Hydraulic longlife fine filter with by-pass (3 my)
- Block valve mounted on lift cylinders

Body

- Anti slip protection on fenders and tanks
- Mud flaps in steel + rubber (front)
- Mud flaps in rubber (rear)

Electronic System

- OLS1, Over Loading System, monitoring lift with speed limit (pop-up)
- OLS2, Over Loading System, cut lift with speed limit (pop-up)
- Lift height limitation
- Lift height warning over defined height (specify height)
- Speed limitation (specify speed)
- Speed limit over defined lift height (specify height)
- Speed limit outside drive position
- Dynamic speed limit depending of lift height
- Dynamic speed limit depending on load, two levels

Electrical System 24V

- 2 extra working LED-lights on mudguard
- 4 extra working LED-lights on mudguard
- 2 extra working LED-lights on cabin roof
- 4 extra working LED-lights on cabin roof
- 6 extra working LED-lights on cabin roof
- 8 extra working LED-lights on cabin roof
- 2 extra working LED-lights on mast
- 2 extra working LED-lights on carriage
- 2 extra reverse LED-lights on counter weight
- 1 extra warning LED-beacon the top of the mast
- 1 extra entrance LED-lights on left stairway + button
- 2 el. heated mirrors on front mudguards (std pos.)
- 2 el. heated & adjustable mirrors on front mudguards
- Buzzer when reversing (reverse alarm)
- Radio with MP3, Bluetooth, speakers (24V)
- DAB-Radio with CD, MP3, Bluetooth, speakers (24V)
- 2 x 24V sockets and 2 x 12V sockets in cabin
- 2 x 24V sockets and 2 x 5V / USB sockets in cabin
- Electric air pressure horn

Lift Carriage/Attachment

- Automatic extension 20-40 incl 30 stop
- Soft landing by inductive sensor (on twistlocks only)
- Hydraulic Pile Slope by cylinders (HPS ±5 deg), the MPS with 0-9.8" end beam levelling is included
- All trucks has full lifting capacity with MPS & HPS
- Available for both single and double stackers

Attachment Single Stacker

- Twistlock spreader for wide body (TWL-WTP)
- Spreader for both standard and wide body containers
- Standard / wide body containers are 8ft / 8,5ft wide
- 2 lift heads with Wide Twistlock Position (WTP)
- Hydraulic moveable twistlocks (stroke 76 mm/3")

Attachment Double Stacker

- Hook, clamp & safety wedge double spreader (HC-SW)
- Lift heads with lift hook and hydraulic side clamp
- Hydraulic safety wedge (SW) for bottom container lock
- Active safety locking of 45-53ft single containers
- 45-53ft containers are looked by safety wedge (SW)

Steer Axle (rear)

- Wheel nut protection on steer tires
- Steer cylinder spacer

Wheels

- Spare wheel & rim 12.00x24" of various brands
- Spare wheel & rim 14.00x24" of various brands

Additional equipment

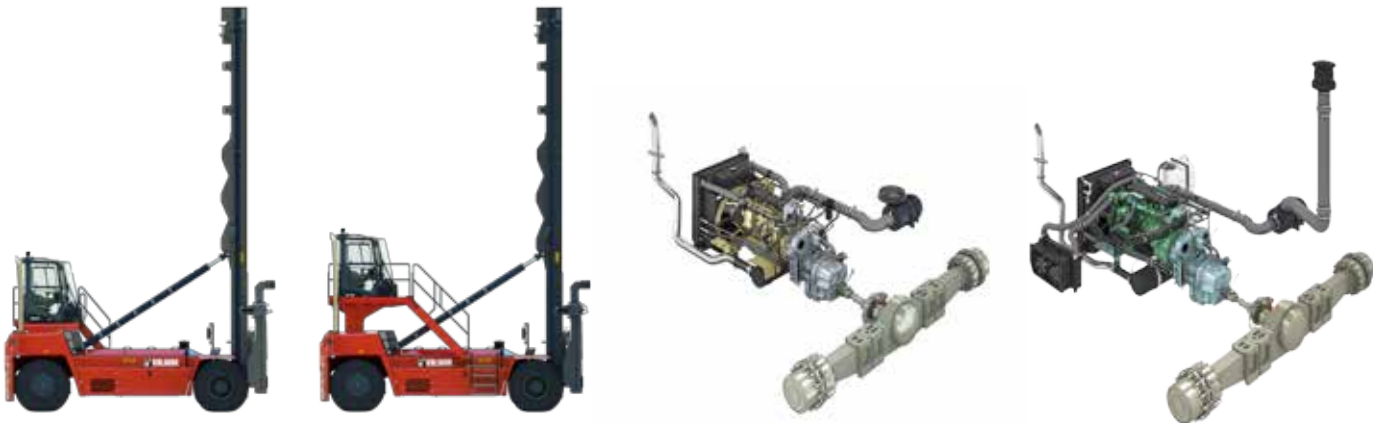
- Reverse display inside cabin (7"/17 cm)
- Reverse camera connected to display in cabin
- Spreader cameras (2x) connected to display in cabin
- Reverse warning system (camera, display & sensors)
- Tyre pressure monitoring system (Bluetooth)
- Diesel powered cabin heater 5 kW
- Alco-lock Draeger in cabin
- Semi-automatic fire suppression system (DAFO)
- Fire extinguisher 5-6 kg, powder
- Lockable fuel cap
- Cabin heater incl 220V outlet
- Engine heater incl cab heater
- Engine/hydraulic oil heater incl cab heater
- Central greasing base machine
- Central greasing spreader
- Chain greaser with replaceable cartridge
- SmartFleet solutions
- Tool kit
- Filter-kit 2000 hrs

Colour

- Other colour than STD - on chassis (specify RAL no)
- Other colour than STD - on cabin (specify RAL no) plastic foil
- Other colour than STD - on rims (specify RAL no)
- Reinforced anti-corrosion protection (extra primer)

Training

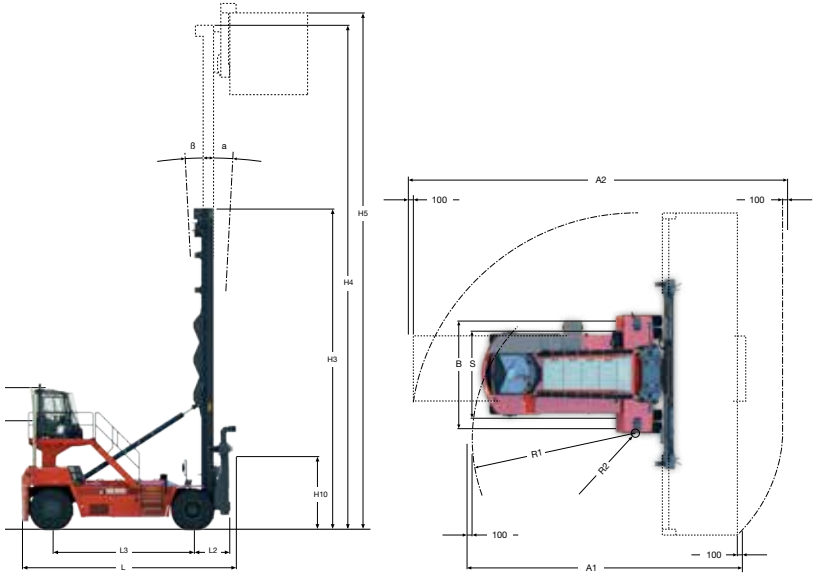
- Contact Kalmar Training Center for training programs
- Working ECO driving



Technical information.

MANDATES	1	Truck Model		DCG 80-45 ES				DCG 80-45 ED				
	2	Stacking model and height		ES5/5	ES6/5	ES7/6	ES8/7	ED5/5	ED6/5	ED7/6	ED8/7	
	3	Type of handling		Single Stackers				Double Stackers				
	4	Lifting capacity, with MPS or with HPS (1*)	Q1	(kgs)	8000	8000	8000	8000	8000	8000	8000	
	5	Stacking height, no. of containers (8ft6" / 9ft6")			5/5	6/5	7/6	8/7	5+1/5+1	6+1/5+1	7+1/6+1	8+1/7+1
	6	Spreader locking type, standard / optional			STD: Twistlocks / OPT: Twistlocks + WTP (76 mm)				STD: Hooks + Clamps / OPT: STD + Safety Wedge			
	7	Spreader type, extension stops, sensors			Sidelift, 20ft + 40ft stops, alignment & interrupt sensors				Sidelift, 20ft + 40ft stops, alignment & interrupt sensors			
	8	Wheelbase	L3	(mm)	4550				4550			
	9	Load centre, front of tyres, with MPS or HPS (2*)	L4	(mm)	1210 or 1260				1210 or 1260			
	10	Lost load centre, to front face of tires	X	(mm)	700				700			
WEIGHTS	11	Service weight, with MPS or HPS (2*)		(kgs)	34700/35800	35300/36400	36800/37900	38300/39400	36500/37600	37100/38200	38600/39700	40100/41200
	12	Axle load, front unloaded - rated load MPS		(kgs)	22400/34700	23100/35300	24700/37000	26400/38600	23000/35300	23600/35900	25300/37600	26900/39200
	13	Axle load, front unloaded - rated load HPS (2*)		(kgs)	23700/36000	24400/36700	26100/38400	27700/40000	24300/36600	25000/37300	26600/39000	28200/40600
	14	Axle load, rear unloaded - rated load MPS		(kgs)	12300/8000	12200/7900	12100/7800	11900/7600	13500/9300	13500/9200	13300/9100	13200/8900
	15	Axle load, rear unloaded - rated load HPS (2*)		(kgs)	12100/7700	12000/7600	11800/7500	11700/7300	13300/9000	13200/8900	13100/8700	13000/8600
WHEELS	16	Tyres, type, design, thread depth			Pneumatic / Diagonal / E4				Pneumatic / Diagonal / E4			
	17	Tyres, dimension (front + rear)		(in)	12,00x24"	12,00x24"	12,00x24"	12,00x24"	14,00x24"	14,00x24"	14,00x24"	14,00x24"
	18	Rims, dimension (front + rear)		(in)	8,50x24"	8,50x24"	8,50x24"	8,50x24"	10,00x24"	10,00x24"	10,00x24"	10,00x24"
	19	No. of wheels, front - rear (*driven), pressure		(MPa)	4* - 2		1.0		4* - 2		1.0	
	20	Track width (front - rear)	S1 - S2	(mm)	3270-2450	3270-2450	3270-2450	3270-2450	3270-2450	3270-2450	3780-2400	3780-2400
	21	Truck width drive axle, standard / optional	B / B	(mm)	4050/4100	4050/4100	4050/4100	4050/4100	4100/4600	4100/4600	4600	4600
	22	Drive axle (ND = Normal Duty / HD = Heavy Duty)			D81-ND	D81-ND	D81-ND	D81-ND	D81-ND	D81-ND	D91-HD	D91-HD
DIMENSIONS	23	Lift mast, type, stage, cylinders and chains			Duplex / 2-stage / 2 cylinders / 2 lift chains				Duplex / 2-stage / 2 cylinders / 2 lift chains			
	24	Mast tilt, forward – backward,standard / optional	alfa-beta	(deg)	STD: 3-3 / OPT: 3-6 or 2-3				STD: 3-3 / OPT: 3-6 or 2-3			
	25	Lift mast height, min - max	H3 - H5	(mm)	8540-15040	9040-16040	10290-18540	11540-21040	8540-15040	9040-16040	10290-18540	11540-21040
	26	Lift height, min - max in twistlocks / lift hooks	H10 - H4	(mm)	2240-15240	2240-16240	2240-18740	2240-21240	2240-15240	2240-16240	2240-18740	2240-21240
	27	Height cabin roof, standard / optional	H6	(mm)	STD: 3940 / OPT: 4540				STD: 4000 / OPT: 4600			
	28	Seat index point (height)	H8	(mm)	STD: 2800 / OPT: 3400				STD: 2860 / OPT: 3460			
	29	Truck length with spreader, MPS / HPS	L	(mm)	6900/6950				6900/6950			
	30	Spreader width, twistlocks / hooks, min - max	Va - Vb	(mm)	6085-12200				6615-12750			
	31	Spreader sideshift, stroke both directions (total)	V1	(mm)	± 600 (1200)				± 600 (1200)			
	32	Spreader levelling, MPS / HPS, standard / optional		(mm/deg)	STD: 0 - 250 / OPT HPS: ± 5 (incl MPS)				STD: 0 - 250 / OPT HPS: ± 5 (incl MPS)			
	33	Ground clearance, steer axle - middle - front		(mm)	250				300			
	34	Aisle width, with 20ft - 40ft container	A1 - A2	(mm)	10600/14200				10600/14200			
	35	Turning radius, inner / outer 20ft / outer 40ft	R1-R2-R3	(mm)	1150 / 6750 / 9350				1150 / 6750 / 9350			
DRIVE LINE	36	Engine type, design			Diesel / 4-stroke / turbo / intercooler				Diesel / 4-stroke / turbo / intercooler			
	37	Drive line - performance levels			MP Medium Performance		HP High Performance		MP Medium Performance		HP High Performance	
	38	Engine, power - torque, min / max		(kW/Nm)	160 - 164 / 910 - 1060		185 / 1160		160 - 164 / 910 - 1060		185 / 1160	
	39	Fuel consumption, average diesel / AdBlue (3*)		(L/h-%)	5 - 15 / 1 - 5		5 - 15 / 1 - 5		5 - 15 / 1 - 5		5 - 15 / 1 - 5	
	40	Travel speed, fwd / rev (unloaded - at rated load)		(km/h)	24 - 24 / 22 - 22		25 - 25 / 25 - 25		24 - 24 / 22 - 22		25 - 25 / 25 - 25	
	41	Gradeability, max / 2 km/h (unloaded - at rated load)		(%)	29 - 22 / 24 - 19		37 - 30 / 33 - 27		29 - 22 / 24 - 19		37 - 30 / 33 - 27	
	42	Lifting speed, unloaded - at 70% of rated load		(m/s)	0,55 - 0,50		0,65 - 0,60		0,55 - 0,50		0,65 - 0,60	
	43	Lowering speed, unloaded - at rated load		(m/s)	0,50 - 0,60		0,55 - 0,60		0,50 - 0,60		0,55 - 0,60	
	44	Transmission, gears forward / reverse			3 + 3		4 + 4 with Lock-Up		3 + 3		4 + 4 with Lock-Up	
	45	Transmission type, function, safety			Automatic powershift / reverse protection				Automatic powershift / reverse protection			
OTHERS	46	Drive axle type, service brakes (drive wheels)			Differential / hub reduction / oil-cooled wet disc brakes				Differential / hub reduction / oil-cooled wet disc brakes			
	47	Drive axle, parking brake, brake release			Single big dry disc / hydraulic release				Single big dry disc / hydraulic release			
	48	Steer axle type, design, function			Heavy-duty / single cylinder / power steering				Heavy-duty / single cylinder / power steering			
	49	Hydraulic system, type			Load-sensing (power-on-demand)/working & brake oil tank				Load-sensing (power-on-demand)/working & brake oil tank			
50	Tank volumes, diesel - AdBlue* - oil		(dm³)	380 / 15* / 320				380 / 15* / 320				
51	Noise, inside LpAZ / outside LwAZ (EDM's)		(dB(A))	63 - 66 / 104 - 108				63 - 66 / 104 - 108				
52	Over Load System with warning OLS1 + OLS2		Optional	OLS-1: Lift Monitor				OLS-2: Lift Cut-off+Tilt Monitor				

- Notes:
1) MPS = Full lifting capacity with MPS (8-9-10 tons).
HPS = Full lifting capacity with HPS incl MPS (8-9-10 tons).
2) MPS = Mechanical Pile Slope in end beams - by gravity.
HPS = Hydraulic Pile Slope by 2 cylinders incl. MPS.
3) On EU3 (EPA T3) engines there is no AdBlue package included.
On EU4 (EPA T4F) engines AdBlue package is included.



DCG 90-45 ES				DCG 90-45 ED				DCG 100-45 ES				DCG 100-45 ED			
ES5/5	ES6/5	ES7/6	ES8/7	ED5/5	ED6/5	ED7/6	ED8/7	ES5/5	ES6/5	ES7/6	ES8/7	ED5/5	ED6/5	ED7/6	ED8/7
Single Stackers				Double Stackers				Single Stackers				Double Stackers			
9000	9000	9000	9000	9000	9000	9000	9000	10000	10000	10000	10000	10000	10000	10000	10000
5/5	6/5	7/6	8/7	5+1/5+1	6+1/5+1	7+1/6+1	8+1/7+1	5/5	6/5	7/6	8/7	5+1/5+1	6+1/5+1	7+1/6+1	8+1/7+1
STD: Twistlocks / OPT: Twistlocks + WTP (76 mm)				STD: Hooks + Clamps / OPT: STD + Safety Wedge				STD: Twistlocks / OPT: Twistlocks + WTP (76 mm)				STD: Hooks + Clamps / OPT: STD + Safety Wedge			
Sidelift, 20ft + 40ft stops, alignment & interrupt sensors				Sidelift, 20ft + 40ft stops, alignment & interrupt sensors				Sidelift, 20ft + 40ft stops, alignment & interrupt sensors				Sidelift, 20ft + 40ft stops, alignment & interrupt sensors			
4550				4550				4550				4550			
1210 or 1260				1210 or 1260				1210 or 1260				1210 or 1260			
700				700				700				700			
700/37800	37300/38400	38800/39900	40300/41400	37900/39000	38500/39600	40000/41100	41500/42600	39400/40500	40000/41100	41500/42600	43000/44100	39800/40900	40400/41500	41900/43000	43400/44500
900/36700	23600/37400	25200/39000	26900/40700	23500/37400	24200/38000	25800/39700	27500/41300	23800/39200	24500/39900	26200/41500	27800/43200	24300/39700	25000/40300	26600/42000	28300/43800
200/38100	24900/38800	26500/40300	28200/42000	24900/38700	25500/39400	27200/41100	28800/42700	25100/40600	25800/41200	27500/42900	29100/44500	25600/41100	26300/41800	27900/43400	29600/45100
3800/9000	13700/8600	13600/8800	12400/8600	14400/9600	14300/9500	14200/9400	14000/9200	15600/10200	15500/10200	15400/10000	15200/9900	15500/10100	15400/10100	15300/9900	15100/9700
3600/8700	13500/8600	13400/8600	13200/8400	14100/9300	14100/9200	13900/9000	13800/8900	15400/9900	15300/9900	15100/9700	15000/9600	15300/9800	15200/9700	15100/9600	14900/9400
Pneumatic / Diagonal / E4				Pneumatic / Diagonal / E4				Pneumatic / Diagonal / E4				Pneumatic / Diagonal / E4			
4,00x24"	14,00x24"	14,00x24"	14,00x24"	14,00x24"	14,00x24"	14,00x24"	14,00x24"	14,00x24"	14,00x24"	14,00x24"	14,00x24"	14,00x24"	14,00x24"	14,00x24"	14,00x24"
0,00x24"	10,00x24"	10,00x24"	10,00x24"	10,00x24"	10,00x24"	10,00x24"	10,00x24"	10,00x24"	10,00x24"	10,00x24"	10,00x24"	10,00x24"	10,00x24"	10,00x24"	10,00x24"
4* - 2		1.0		4* - 2		1.0		4* - 2		1.0		4* - 2		1.0	
270-2400	3270-2400	3270-2400	3270-2400	3270-2400	3270-2400	3270-2400	3780-2400	3780-2400	3780-2400	3780-2400	3780-2400	3270-2400	3270-2400	3780-2400	3780-2400
1100/4600	4100/4600	4100/4600	4100/4600	4100/4600	4100/4600	4600	4600	4100/4600	4100/4600	4100/4600	4100/4600	4100/4600	4100/4600	4600	4600
D81-ND	D81-ND	D81-ND	D81-ND	D91-HD	D91-HD	D91-HD	D91-HD	D91-ND	D91-ND	D91-ND	D91-ND	D91-ND	D91-ND	D91-ND	D91-HD
Duplex / 2-stage / 2 cylinders / 2 lift chains				Duplex / 2-stage / 2 cylinders / 2 lift chains				Duplex / 2-stage / 2 cylinders / 2 lift chains				Duplex / 2-stage / 2 cylinders / 2 lift chains			
STD: 3-3 / OPT: 3-6 or 2-3				STD: 3-3 / OPT: 3-6 or 2-3				STD: 3-3 / OPT: 3-6 or 2-3				STD: 3-3 / OPT: 3-6 or 2-3			
800-15100	9100-16100	10350-18600	11600-21100	8600-15100	9100-16100	10350-18600	11600-21100	8600-15100	9100-16100	10350-18600	11600-21100	8600-15100	9100-16100	10350-18600	11600-21100
800-15300	2300-16300	2300-18800	2300-21300	2300-15300	2300-16300	2300-18800	2300-21300	2300-15300	2300-16300	2300-18800	2300-21300	2300-15300	2300-16300	2300-18800	2300-21300
STD: 4000 / OPT: 4600				STD: 4000 / OPT: 4600				STD: 4000 / OPT: 4600				STD: 4000 / OPT: 4600			
STD: 2860 / OPT: 3460				STD: 2860 / OPT: 3460				STD: 2860 / OPT: 3460				STD: 2860 / OPT: 3460			
6900/6950				6900/6950				6900/6950				6900/6950			
6085-12200				6615-12750				6085-12200				6615-12750			
± 600 (1200)				± 600 (1200)				± 600 (1200)				± 600 (1200)			
STD: 0 - 250 / OPT HPS: ± 5 (incl MPS)				STD: 0 - 250 / OPT HPS: ± 5 (incl MPS)				STD: 0 - 250 / OPT HPS: ± 5 (incl MPS)				STD: 0 - 250 / OPT HPS: ± 5 (incl MPS)			
300				300				300				300			
10850/14350				10850/14350				10850/14350				10850/14350			
1250 / 7000 / 9700				1250 / 7000 / 9700				1250 / 7000 / 9700				1250 / 7000 / 9700			
Diesel / 4-stroke / turbo / intercooler				Diesel / 4-stroke / turbo / intercooler				Diesel / 4-stroke / turbo / intercooler				Diesel / 4-stroke / turbo / intercooler			
MP Medium Performance		HP High Performance		MP Medium Performance		HP High Performance		MP Medium Performance		HP High Performance		MP Medium Performance		HP High Performance	
160 - 164 / 910 - 1060		185 / 1160		160 - 164 / 910 - 1060		185 / 1160		160 - 164 / 910 - 1060		185 / 1160		160 - 164 / 910 - 1060		185 / 1160	
5 - 15 / 1 - 5		5 - 15 / 1 - 5		5 - 15 / 1 - 5		5 - 15 / 1 - 5		5 - 15 / 1 - 5		5 - 15 / 1 - 5		5 - 15 / 1 - 5		5 - 15 / 1 - 5	
24 - 24 / 22 - 22		25 - 25 / 25 - 25		24 - 24 / 22 - 22		25 - 25 / 25 - 25		24 - 24 / 22 - 22		25 - 25 / 25 - 25		24 - 24 / 22 - 22		25 - 25 / 25 - 25	
29 - 22 / 24 - 19		37 - 30 / 33 - 27		29 - 22 / 24 - 19		37 - 30 / 33 - 27		29 - 22 / 24 - 19		37 - 30 / 33 - 27		29 - 22 / 24 - 19		37 - 30 / 33 - 27	
0,55 - 0,50		0,65 - 0,60		0,55 - 0,50		0,65 - 0,60		0,55 - 0,50		0,65 - 0,60		0,55 - 0,50		0,65 - 0,60	
0,50 - 0,60		0,55 - 0,60		0,50 - 0,60		0,55 - 0,60		0,50 - 0,60		0,55 - 0,60		0,50 - 0,60		0,55 - 0,60	
3 + 3		4 + 4 with Lock-Up		3 + 3		4 + 4 with Lock-Up		3 + 3		4 + 4 with Lock-Up		3 + 3		4 + 4 with Lock-Up	
Automatic powershift / reverse protection				Automatic powershift / reverse protection				Automatic powershift / reverse protection				Automatic powershift / reverse protection			
Differential / hub reduction / oil-cooled wet disc brakes				Differential / hub reduction / oil-cooled wet disc brakes				Differential / hub reduction / oil-cooled wet disc brakes				Differential / hub reduction / oil-cooled wet disc brakes			
Single big dry disc / hydraulic release				Single big dry disc / hydraulic release				Single big dry disc / hydraulic release				Single big dry disc / hydraulic release			
Heavy-duty / single cylinder / power steering				Heavy-duty / single cylinder / power steering				Heavy-duty / single cylinder / power steering				Heavy-duty / single cylinder / power steering			
Load-sensing (power-on-demand)/working & brake oil tank				Load-sensing (power-on-demand)/working & brake oil tank				Load-sensing (power-on-demand)/working & brake oil tank				Load-sensing (power-on-demand)/working & brake oil tank			
380 / 15° / 320				380 / 15° / 320				380 / 15° / 320				380 / 15° / 320			
63 - 66 / 104 - 108				63 - 66 / 104 - 108				63 - 66 / 104 - 108				63 - 66 / 104 - 108			
OLS-1: Lift Monitor				OLS-2: Lift Cut-off/Tilt Monitor				OLS-1: Lift Monitor				OLS-2: Lift Cut-off/Tilt Monitor			



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