



# Loaded Container Handler

DCG410GS  
Top Loader



# It's an easy choice to make

Our loaded container handlers deliver on so many fronts. They are reliable, easier to maintain and safer to operate, making them a very easy choice.

## A common platform makes things easier

With over 10,000 machines now built on our G-Generation platform, you can expect your new Kalmar Loaded Container Handler to be easier to operate and maintain as it has all of Kalmar's experience and knowledge built in.

## Easier to operate

Your top loader comes fitted with our ergonomically designed cabin which has improved visibility and fully adjustable steering wheel, seat and control panels. Plus, your drivers will be comfortable all year round with heating and ventilation fitted as standard or you can add an optional electronic climate control for extra comfort.

## Easier to lift heavy loads

All of our G-Generation top loaders come fitted with a variable hydraulic lifting system, which provides exactly the right amount of lifting power based on the weight of your load, saving you fuel as your drivers no longer need to rev the engine while lifting.

## Easier to solve issues

With improved diagnostics and fewer moving parts and components, issues will be quicker to identify and solve getting your top loader back to work as soon as possible.

## Easier to service and maintain

With easily accessible service points, engine hatches instead of a hood and extended service intervals, your new top loader will be easier and quicker to maintain, saving you time and money.



Lift loaded containers with ease.



# Easier to operate

Our loaded container handler comes fitted with our ergonomically designed EGO Cabin, which provides a superior operating experience for your drivers. With its smart functions and a more intuitive workspace, your drivers will be able to operate at their best every day, with ease.



#### Improved visibility.

An open cabin design for optimised visibility at all angles. Smart profiles and curved windows combine to give exceptionally strong forward, diagonal, and rearward visibility. Our front and rear wiper system cleans a bigger area of the front windscreens and the transparent roof than before, making sure your forward and upward view stays extra clean and clear at all times.



#### Minimise driver fatigue.

With Kalmar's ergonomic Ego joystick, electronically adjustable work console and side tilt steering wheel, the controls and settings are all designed to minimise driver fatigue and maximise operational efficiency.



#### More comfortable.

With an adjustable driver's seat, quieter cabin and climate control system with smarter controls, your driver will benefit from improved ventilation, heating and cooling, plus a cabin with superior interior comfort. An optional cabin air intake precleaner can also be fitted if required.



#### An improved user interface.

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

## A robust, hard working machine.

Kalmar solutions are known for their reliability and durability and our top loader is no exception. The top loader's chassis is mechanically welded and optimised according to three main parameters: strength, weight and stability. In addition, the machine's stability has been improved by creating the perfect balance between the counter-weight and the lifting height. We also go to great lengths to make sure that the systems and components fitted to our top loaders are made to last.

The result of bringing together improved stability, an optimised chassis and components and systems that are manufactured to last will deliver a much more robust and durable machine that is ready to get to work.



# Easier on the environment

There are many easy things you can do to cut your emissions and reduce your fuel bill without compromising the operational efficiency of your top loader. The less fuel you use, the less CO<sub>2</sub> you produce.



5%

## Cut up to 5% in fuel costs and emissions

You will benefit from a reduction of up to 5% in fuel consumption and emissions with our range of highly efficient drivelines in comparison to the drivelines fitted in our previous generation of top loaders.

10%

## Cut up to 10% off fuel costs and emissions

All of our top loaders are fitted with variable hydraulic systems which adjust their effort to the weight of the load they are moving, resulting in up to a 10% reduction in fuel costs and emissions.

10%

## Cut up to 10% more off fuel costs and emissions

All of our top loaders are fitted with a lock-up gearbox as standard which is able to use the power your engine produces much more effectively, resulting in a further reduction of up to 10% in fuel consumption and emissions.

25%

## Cut up to 25% in fuel costs and emissions

All of our G-Generation top loaders come fitted with Eco Drive, which when set in Eco Mode can cut your fuel consumption and emissions by up to 25%.

# Easier to maintain

Our range of loaded container handlers have been designed to reduce the time and effort required to service and maintain them.

With fewer moving parts and components, improved access to service points and longer service intervals you will spend less time and money on keeping your machine in optimal working condition.

You can also manage your service and maintenance activities through MyKalmar INSIGHT.



# Safer to Operate

To keep your drivers and colleagues secure we have introduced a number of additional safety features.

Your drivers will now be safer entering or exiting their top loader, as there are more handrails and bars allowing for 3-point contact at all times, plus all the climbing surfaces are non-slip. Our EGO Cabin provides improved visibility both forward, rearward and upward and there are a number of additional safety options to make your machine even safer when in operation.

There are also a number of upgrade options available which can further enhance the operational safety of your top loader including a Rear Vision Camera with monitor in the cab that lets you see what is going on behind you, Travel Speed Limitation which makes sure your drivers are operating within designated application speed limits and Seat Belt Interlock to help enforce seat belt usage.



# Choose your own upgrades



**Kalmar Safety Cameras and detection solutions.** There is a wide range of camera and detection solutions available that will enhance the overall safety of your equipment when in operation. Cameras will extend and enhance the driver's visibility range, improving safety and productivity depending on placement. Top-level options offer surround view, the ability to record the course of events, and alert the driver of pedestrians in the vicinity of the equipment. Adding radar sensors will warn about objects when reversing. You can choose one solution or combine a number together.



**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.



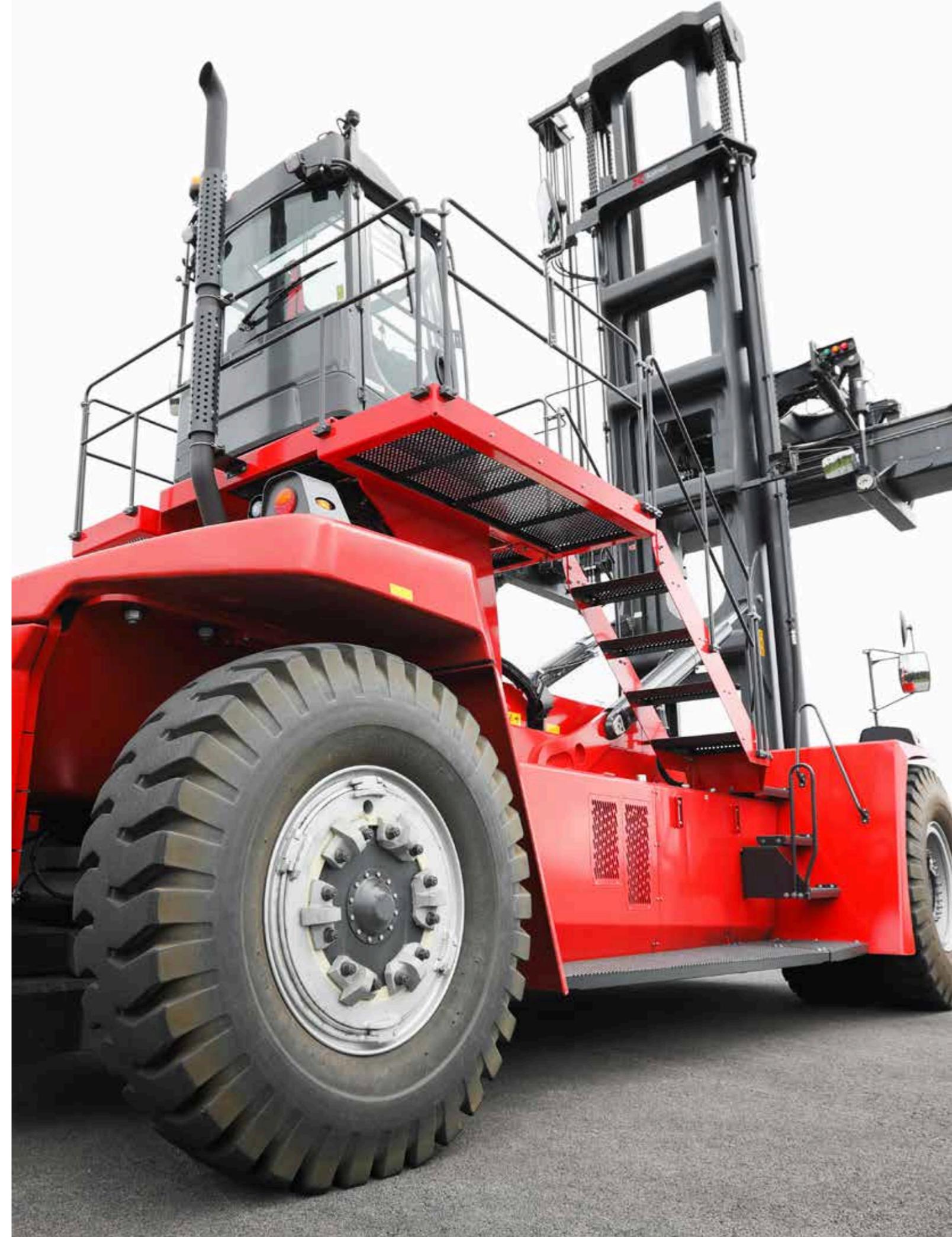
**Alco-Lock.** To ensure your driver is at their best when operating your equipment you can install an Alco-Lock system. This system can help ensure that the driver meets alcohol blood level standards before being able to start the machine, much like a breathalyser.



**Additional lighting.** If you have to operate your machine at night, extra lighting can bring greater operational visibility and safety for personnel. You can choose additional LED working lamps on your cabin roof, the steps, the mast or placed at the front or rear of your top loader.



**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 rechargeable tank. This can be activated manually or automatically through an in-cabin temperature sensor.





# Keep moving with Kalmar Services

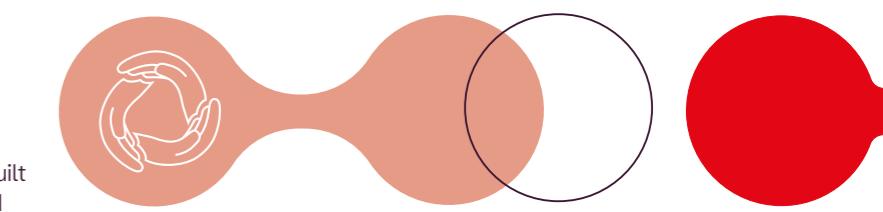
To keep your business moving Kalmar Services offers a range of services that can help you keep your equipment moving optimally.

## Kalmar Care

Care that keeps your business moving.

With Kalmar Care you get a flexible service that's built around your business. Including, the experience and knowledge of Kalmar's dedicated staff, coupled with transparency and increased predictability of costs.

Kalmar Care is available in three different service models: our two customisable contracts – Essential Care and Complete Care – and our flexible solution On Demand Care.



### Service models:



#### Essential Care

A maintenance solution to keep your equipment in an optimal condition.



#### Complete Care

A complete service solution providing piece of mind and maximum equipment uptime.



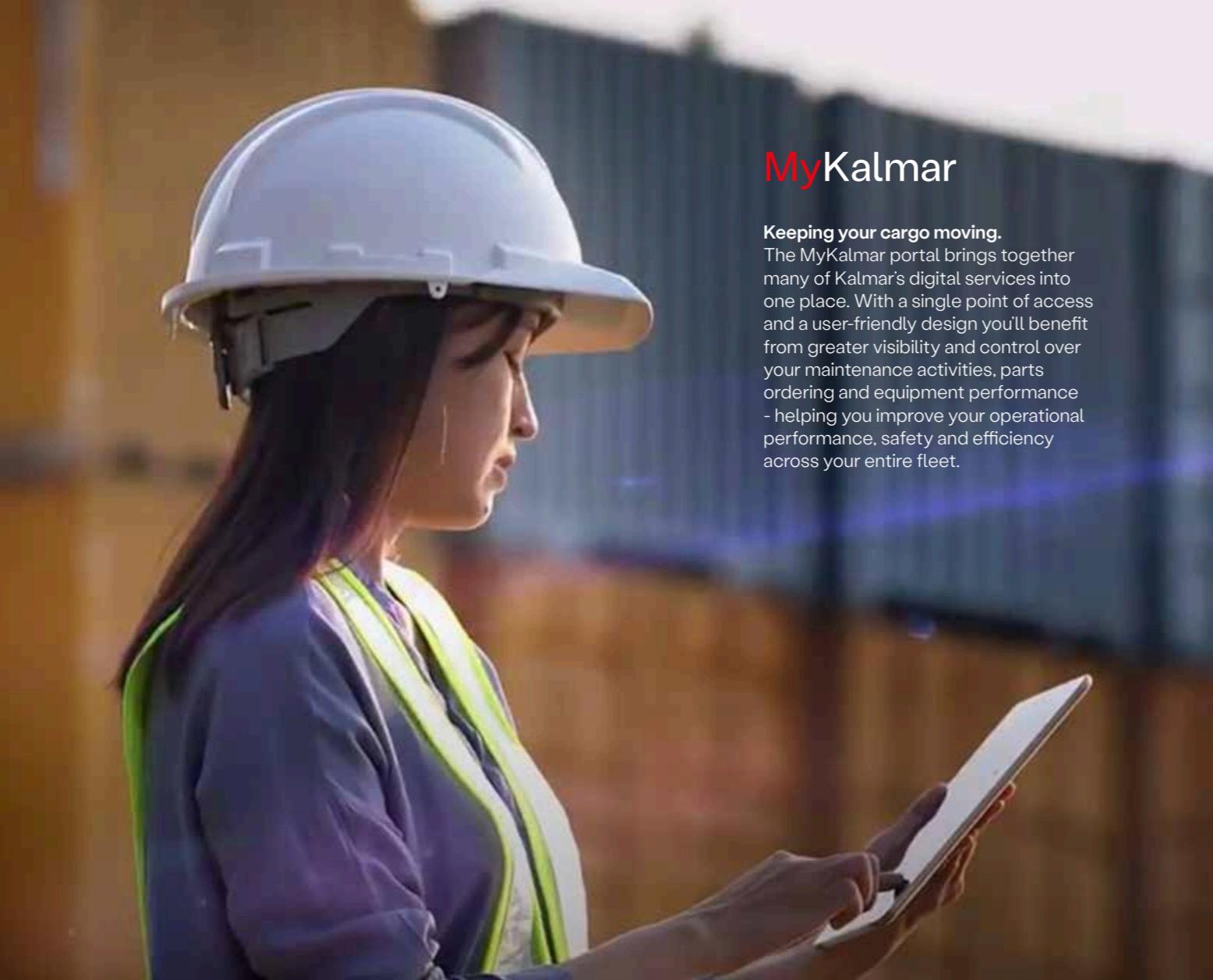
#### On Demand Care

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

|                        |   |   |
|------------------------|---|---|
| Maintenance Planning   | ● | ● |
| Preventive Maintenance | ● | ● |
| Predictive Maintenance |   | ● |
| Corrective Maintenance |   | ● |
| Preventive Spare Parts | ● | ● |
| Corrective Spare Parts |   | ● |
| Lubricants             | ● | ● |
| MyKalmar               | ● | ● |
| MyKalmar INSIGHT       | ● | ● |
| Tyre Maintenance       |   | ● |
| Battery Maintenance    |   | ● |

● Included      ● Optional

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



## MyKalmar

### Keeping your cargo moving.

The MyKalmar portal brings together many of Kalmar's digital services into one place. With a single point of access and a user-friendly design you'll benefit from greater visibility and control over your maintenance activities, parts ordering and equipment performance - helping you improve your operational performance, safety and efficiency across your entire fleet.

## MyKalmar INSIGHT

### Optimise your operations with Insight.

MyKalmar INSIGHT\* is a performance management tool for cargo handling, which gives you an easy to use overview of your fleet operations, by aggregating data from multiple sources, including equipment built by other manufacturers. Review your entire fleet activities, schedule maintenance activities and

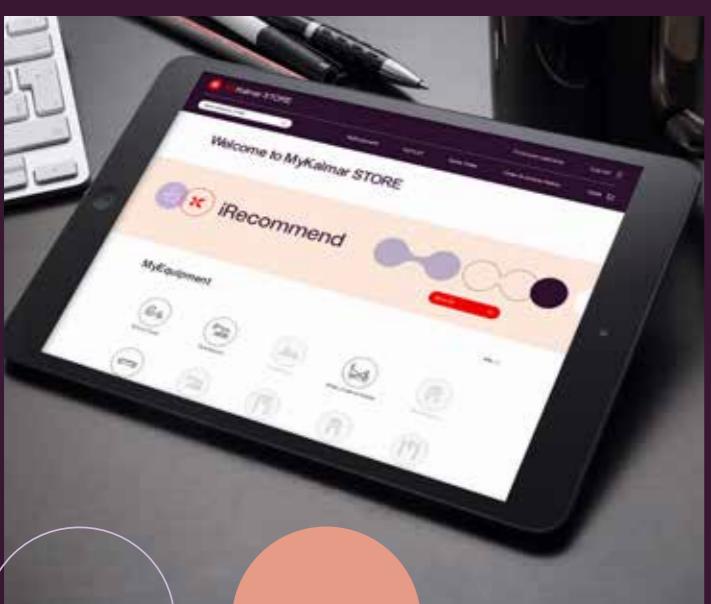
order the required parts automatically. All enabling you to take action on real-time information, that will help improve your overall operations immediately. MyKalmar INSIGHT comes fitted and ready to be activated in all new Kalmar equipment, it can also be retrofitted into existing Kalmar equipment or those built by other manufacturers.



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

## MyKalmar STORE

MyKalmar STORE is your one stop shop for all the parts you need which is accessible through MyKalmar. Open 24/7, accessible on any screen and available in different languages, MyKalmar STORE stocks 100s of thousands of Kalmar Genuine Parts at any given time and we can have them delivered quickly to you, no matter where you are in the world. You can search, order and then track your order all through the same application. MyKalmar STORE has been designed to make your life easier.



## Kalmar Training

### Enhance your skills.

To get the most out of your new machine our training centre offers a range of courses for both your technicians and operators. Operators can be taught how to drive the machine for optimum performance and minimum waste, and to learn what needs to be checked daily for optimal safety. Technicians can be educated with the knowledge they need to keep your new equipment in top condition in a safe way. Courses are a mix of theory and hands-on experience.

## Financing options for you

You may choose to buy your equipment 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 rental solutions 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 or rental package is right for your business. Kalmar can also help you with 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.

# Standard

## DCG410GS Loaded Container Handler

### Norms, standards and regulations according to:

- Machinery Directive 2006/42/EC
- Safety Industrial Trucks Standard ISO 3691-1 + EN 16307-1
- Safety Low & High Lift Trucks Standard ANSI / ITSDF B56.1
- Stability Masted Forklift Trucks Standard ISO 22915-1, -2
- Electrics / Electronics Standard EN 1175
- Electromagnetic Compatibility Directive 2014/30/EC
- Electromagnetic Compatibility Standard EN 12895
- Noise Emission Directive 2000/14/EC and 2005/88/EC
- Noise Emission Standard EN 12053
- CE-marking (EU/EEA)
- ANSI / ITSDF-marking Forklift Trucks (USA/CAN)
- AS-marking (Australia)
- UKCA-marking (UK)
- Supply of Machinery (Safety) Regulations 2008 (UK)

### Chassis

- Strong, durable and welded box-beam heavy-duty chassis
- Powerful front end unit for drive axle and lift mast fixations
- Solid tilt cylinder fixations in chassis and mast
- LHS access stairway, with steps and a wide platform
- High cabin mounting (LCM) at the middle of the truck
- Very good visibility in forward, up, sideways and rearwards
- Chassis with full access to the drive line
- Easy-to-open drive line cover plates (ease of service)
- Lifting eyes (mast) and anchor points (front & rear)
- Towing pin in rear counter weight

### Body

- Strong and protective steel mudguards (front / rear)
- Long bottom step between the mudguards (anti-slip) on both sides
- Big rear view mirrors on front mudguards (2x) + in the mast (2x)
- Lamp brackets bolted on front mudguards (2x)
- Basic noise insulation kit of the forklift

### Steer Axle (rear)

- Kalmar steer axle mounted dual pivot bearings
- Steer axle with mechanical side stops
- Hydraulic power steering with double acting cylinder
- Steer axle with narrow turning radius
- Steer links of "dog-bone type" (easy to change)

### Drive Axle (front)

- Kessler D102 planetary axle with differential drive
- Maintenance-free oil-cooled Wet Disc Brakes (WDB)
- Single parking brake, spring loaded & hydraulic release
- High pressure filter (10 my) for the brakes
- Drive Axle DCG410GS with 6/6 high mast, Width 4900mm

### Wheels (tyres & rims)

- DCG410GS, Tyres 18.00 x 33" / rim 13.00x33 / 2.5

### Drivetrain

- DANA Automatic transmission TE-30500 (5+3 gears / with lockup)
- Volvo D11, EU Stage 3 and 5 (EPA Tier 3 and 4F)
- 6-cylinder diesel engines with pre-heater
- High power & torque with low fuel consumption
- Engine monitoring and protection systems
- Automatic DANA transmissions LTE-30500
- Transmission monitoring and reverse protection
- Declutch function activated by the brake pressure
- Strong radiators for engine, transmission & brakes
- Muffler and exhaust pipe in steel
- Diesel tank (850 lit) incl. breather filter

### Load-Sensing Hydraulics

- Load-sensing variable piston pumps (2x)
- Power-on-demand with high lift & lowering speeds
- Pumps for mast, spreader, brakes & steering
- Fixed pump for brake pressure & oil cooling
- 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 (600 lit), cooling, breather filter & ORFS-couplings

### Lift Mast

- Mast design for up to 6-high single stacking
- Duplex 2-stage mast with high mounted tilt cylinder
- Strong, durable mast design (pair of cylinders/ chains)
- Heavy-duty mast profiles and strong cross members
- Mast with strong mast wheels, bearings & guide rollers
- Large shafts-bearing for mast, strong tilt fixation
- Mast tilt angles +5 / -10 deg (FW / BW)

### Lift Carriage

- Carriage with strong wheels, bearings & guide rollers
- The carriage is connected by the 2 lift chains

### Spreader Attachment

- Top Lift (S), 45 tonnes, 20-40; MPS, TWL, 4 lift hooks, sideshift and rotation
- 4 floating twistlocks, LED indication lamps and 2 LED work lamps
- Safety locking, alignment pins (4x) and sensors (4x)
- Indication lamps for alignment / locked container (I+II)
- Large sideshift of ±400 mm (total stroke 800 mm)
- Mechanical Pile Slope by gravity (MPS) ±5°
- Lowering interrupt sensors for safe handling

### Electrical System 24V

- Electric cabinet on chassis, battery box, batteries 24V & main power switch
- Electric cabinet, mounted behind driver
- 2 LED head lights on front fenders
- 2 LED working lights on mast (first cross member)
- 2 LED working lights rear on cabin (reverse)
- 4 LED turn signal lights (front - rear / left - right)
- 2 tail / 2 brake LED-lights rear in counter weight
- 2 flashing LED-brake lights (when reversing)
- 1 rotating warning LED-beacon
- Buzzer when reversing (reverse alarm)

### Cabin EGO

#### Structure

- Spacious, modern cabin with great ergonomy level
- Strong profiles, pillars and cross members
- FOPS certified drivers cabin (Falling Object Protection Structure)
- Large window sections with great visibility in all directions

#### Comfort

- Drivers seat, mech. spring suspension
- Comfort seat, adjustable, sensor & 2-point belt
- Electric adjustable work console (up-down/fw-rev)
- Work console: lift levers, controls, lamp buttons etc
- Inside rear view mirrors (right and left side)
- Interior lights with fade away function
- Fully adjustable steering wheel incl tilt function
- Power steering wheel with steer knob

#### Controls

- EGO joystick for mast, spreader & forward / reverse
- Auto rev-up accelerator at lifting / tilting / fork position
- Electric accelerator pedal (hanging)
- Double brake pedals (L + R)

- Multi-function lever LHS (parking brake/travel direction switch)
- Combined horn and turn signal lever
- Warning - parking brake (on/off) leaving seat

### Climate

- ECC, electronic climate control, powerful cooler, heater and ventilator
- Powerful cab heater, power 10 kW (34.100 Btu)
- High-capacity ventilation unit - max air flow 483 m³/h
- Multiple individual blowers (8x upwards / 2x downwards)
- Fresh air and recirculation filter (replaceable)
- Double wipers / washers on front window (larger area)
- Single wipers / washers on roof and rear windows
- Interval wiper functions on front, roof and rear windows

### Information Systems

- Kalmar CanBus controls with 4.3" monitor
- Colour display & automatic fault analysis
- Menu controller with toggle wheel & push buttons
- Programmable settings and full monitoring of all main systems

### ECO Drive Modes (EDM):

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

### Operator menu:

- System voltage
- Transmission gear
- Engine rpm
- Travelling speed (km/h or m/h)
- Combined hydraulic and brake oil temperature
- Transmission oil temperature
- Engine oil pressure
- Engine coolant temperature
- Clock and date
- Operating time (hours)
- Service time indicator (hours)
- Status of heating system
- Fuel level (diesel and optional DEF)
- Est. operating time before empty tank (hour/min)
- Service indicator
- Trip computer / statistics

### Various warning lights & signals:

- Charging battery
- Low brake pressure
- Failure indicator
- High engine coolant temperature
- Low engine coolant level
- Low engine oil pressure
- Preheating engine
- Transmission oil temperature
- Low fuel level (incl DEF)
- Soft landing with ultrasonic sensor (less noise)
- Bromma spreader 20-40ft with WTP function (Wide TWL Position)
- Bromma spreader with OverHeight Folding Legs H=2.00m

### Indicator lamps:

- Direction indication
- Parking brake

### Fleet Management

- Equipped with telemetric hardware for MyKalmar INSIGHT

### Colour

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

### Documentation and Decals

- Load chart 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

### Warranty

- Kalmar standard warranty: 12 months / 2.000 hours

# Options

## DCG410GS - 41 tonne capacity

- Anti-slip strips: front mudguards tanks & lamp brackets
- Extra mud flaps (front and rear)

### Wheels (Tyres and Rims)

- Spare wheels, tyres and rims of various brands
- Diagonal and radial tyres of well known brands
- Diagonals Continental CM+
- Radials: Continental CM-Radial
- Other brands up on request

### Drivetrain

- Volvo TAD-1151-VE (10.84 lit, 265 kW, 1785 Nm, EU3)
- Volvo TAD-1181-VE (10.84 lit, 265 kW, 1785 Nm, EU5 / Tier 4-Final)
- Auto engine & ignition stop, after 5 min idle
- Air intake filter, with Pre-Cleaner, raised air intake
- Start/stop function (for Volvo engine only)

### Hydraulics

- Hydraulic accumulator for lifting function
- Separated tanks for brakes and working hydraulics with cooling on the brake tank
- Working oil tank 500 lit / brake oil tank 115 lit
- Hydraulic oil heater 1kW (single or double)

### Lifting Mast

- Duplex standard (4-high 8'6" / 4-high 9'6")
- Duplex standard (5-high 8'6" / 5-high 9'6")
- Duplex standard (6-high 8'6" / 5-high 9'6")\*
- Duplex standard (6-high 8'6" / 6-high 9'6")\*

### Attachment

- Automatic extension 20'-40' incl 30' stop
- Container guides for 8' wide containers
- Hydraulics Pile Slope, HPS ±5 deg (side tilt)
- Soft landing with ultrasonic sensor (less noise)
- Bromma spreader 20-40ft with WTP function (Wide TWL Position)
- Bromma spreader with OverHeight Folding Legs H=2.00m

### Electrical System (24V)

- Tuner FM, RDS, MP3, USB, Bluetooth, Stream
- Tuner FM, RDS, MP3, USB, Bluetooth, Stream / DAB
- Power sockets: 2x24V and 2x12V (in door columns)
- Power sockets: 2x24V / 1x12V / 2xUSB 5V
- Electric air pressure horn
- Reverse alarm (beeping or white noise - multi frequency)

### Lamps

- 2 extra LED working lights - front on cabin roof
- 2 extra LED working lights - rear on cabin (FW)
- 4 extra LED working lights - rear on cabin (mix)
- 6 extra LED working lights - rear on cabin (mix)
- 2 extra LED working lights - in mast (FW)
- 2 extra LED working lights - on front mudguards
- 2 extra LED working lights - mounted on carriage
- 4 LED containerlights - on cabin roof
- LED light in stairwell
- LED light in electric cabinet
- 1LED rotating warning beacon (on adjustable pole LHS)
- 1LED rotating warning beacon, activated via reverse gear
- Blue safety light, rearward or forward

### Information Systems

- VDI - Vehicle Data Interface

### Safety functions

- Speed limitation: default 15 km/h (set by technician)
- Speed restriction set by customer in display: default 15 km/hv
- Speed limitation at specified load (set by technician)
- Speed limitation at specified lift height (set by technician)
- Overload indication for lift/tilt incl. speed restriction
- Tyre pressure monitoring system (TPMS / Bluetooth)
- Alcock Draeger in cabin

### Cabin EGO

#### Structure

- Globetrotter cabin +200 mm higher, roof 12 mm (repl 6 mm)
- Tilting cabin (10deg)
- Steel grid protection for front window
- Steel grid protection for roof window
- External cabin reverse mirrors (2x)
- External cabin reverse mirrors (2x) with heating

#### Comfort

- Air cushioned driver seat with horizontal suspension
- 3-point seat belt
- Extended seat backrest
- Headrest for driver's seat
- Seat heating
- Seat cover in vinyl
- Leather reinforced seat, high backrest, 3-point belt and heating
- Grammer Actimo XL, air cushion, heating, high back, 2-point belt
- BE-GE 3100, air cushion, heating, airvent, high back, 2-point belt, leather reinforced seat
- Isringhausen 6830KA/880, air cushion, heating, high back, 2-point belt
- Extra trainer seat incl. 2-point belt
- Bracket for terminal and monitor (RHS)

#### Controls

- Electronic joystick - Universal Grip with OPS/without OPS (Otto)
- Electronic lever steering (without feedback)
- Electronic mini-wheel steering (no feedback)

#### Climate

- ECC, electronic heating, cooling (AC) & ventilation
- Sun visors front, roof and rear windows

#### Additional Equipment

- Seat belt interlock (active before driving - seatbelt on)
- Semi-automatic fire suppression system (DAFO Forrex)
- Tool kit
- Central greasing system
- Tilt indicator of mechanical type
- Electronic weight indicator in cabin control monitor

#### Camera safety

- Reverse camera with 7" single view monitor
- Reverse camera with 7" split view monitor
- Reverse camera with 10" split view monitor
- Forward camera mast - to cab monitor
- Radar sensors for object detection rearward with / without connection box
- DVR recorder, up to 4 channels, with SD-card (128 GB)
- 360° camera system with Pedestrian detection & DVR

### Fleet Management (MyKalmar INSIGHT)

- MyKalmar INSIGHT licence (only certified countries)
- MyKalmar INSIGHT Driver Monitor (RFID reader + 10 driver tags)
- MyKalmar INSIGHT extra driver tags (10 tags)

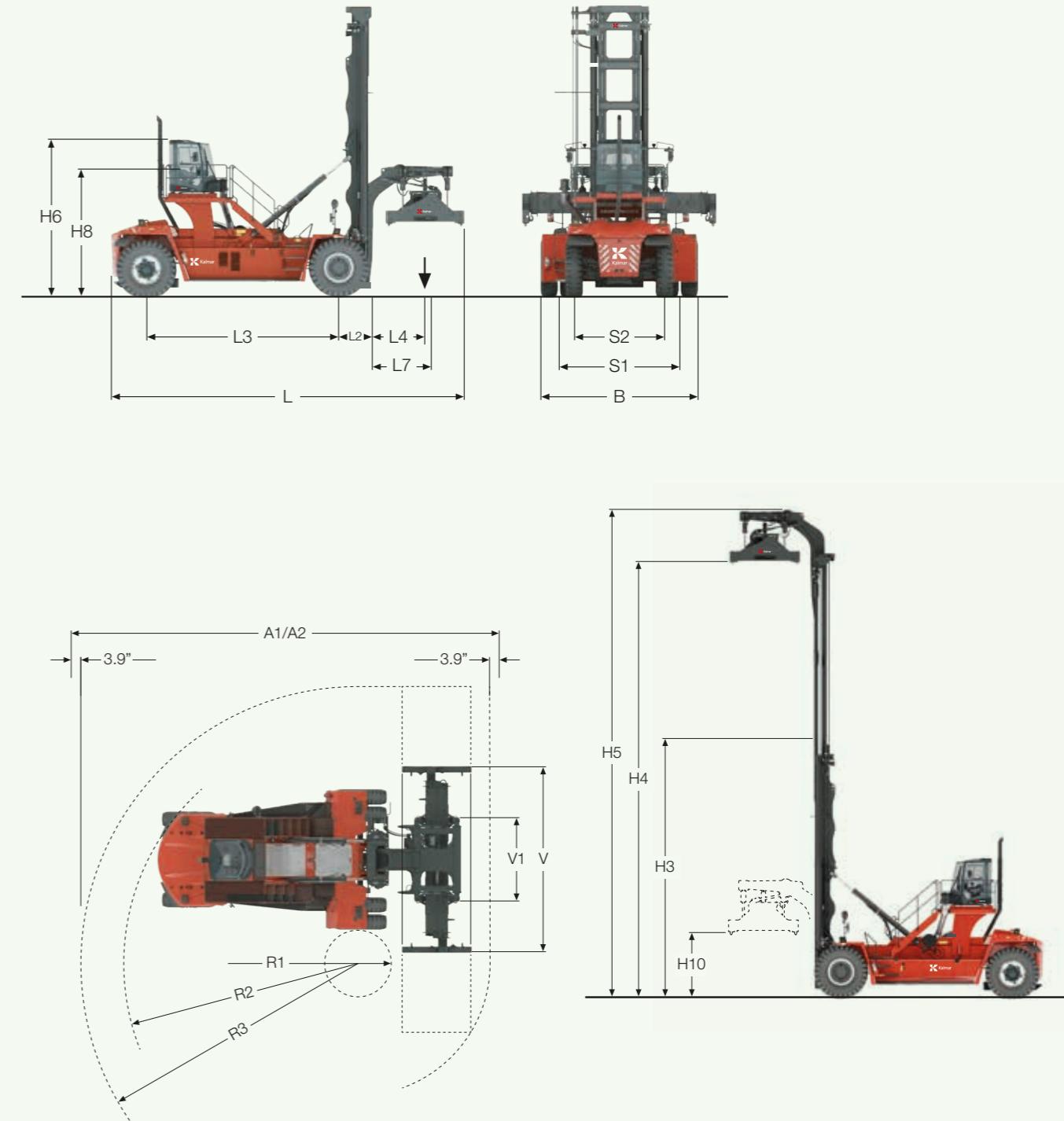
### Colour

# Specifications

| MODELS<br>LIFTING<br>CAPACITY | Models  |   | DCG410GS 4/4 | DCG410GS 5/5  | DCG410GS 6/5    | DCG410GS 6/6    |
|-------------------------------|---|---|--------------|---|-----------------|-----------------|
|                               | Lifting capacity, rated (kg)                              | kg  | 41000        | 41000   | 41000           | 41000           |
|                               | Lifting capacity reduced, >5 high                         | kg  | -            | -   | 34000           | 34000           |
|                               | Load center   | L4 mm                                       | 1625         | 1625  | 1625            | 1625            |
|                               | Lifting height, no. of containers (8'6" / 9'6")           |   | 4/4 high     | 5/5 high  | 6/5 high        | 6/6 high        |
| DIMENSIONS                    | Truck length  | L mm  |              | 11000   |                 |                 |
|                               | Distance front axle / front edge of mast (mm)             | L2 mm                                       |              |   | 935             |                 |
|                               | Wheelbase   | L3 mm                                       |              | 6000  |                 |                 |
|                               | Load center with extended spreader (mm)                   | L7 mm                                       |              | 1825  |                 |                 |
|                               | Width of truck (mm)*                                      | B mm  | 4150         | 4150  | 4150            | 4150            |
|                               | Roof height cabin (basic machine)                         | H6 mm                                       | 4900         | 4900  | 4900            | 4900            |
|                               | Seat height EGO   | H8 mm                                       | 3850         | 3850  | 3850            | 3850            |
|                               | Track (c-c), front / rear                                 | S1 / S2 mm                                  | 3030 / 2815  | 3030 / 2815   | 3030 / 2815     | 3775 / 2815     |
|                               | Turning radius, outer / inner                             | R1 / R2 mm                                  | 8650 / 1200  | 8650 / 1200   | 8650 / 1200     | 8650 / 1200     |
|                               | Min. aisle width for 90° stacking with 20' container (mm) | A1 mm                                       | 12600        | 12600   | 12600           | 12600           |
| LIFTING EQUIPMENT             | Min. aisle width for 90° stacking with 40' container (mm) | A2 mm                                       | 14600        | 14600   | 14600           | 14600           |
|                               | Ground clearance, min                                     | mm  | 300          | 300   | 300             | 300             |
|                               | Lifting height*   | H4 mm                                       | 12160        | 15160   | 16160           | 17960           |
|                               | Mast height, min  | H3 mm                                       | 7550         | 9050  | 9550            | 10450           |
|                               | Mast height, max  | H5 mm                                       | 14120        | 17120   | 18120           | 19920           |
|                               | Height under twistlock                                    | H10 mm                                      | 2160         | 2160  | 2160            | 2160            |
|                               | Mast tilt, forward – backward                             | a – B °                                     | 5/10         | 5/10  | 5/10            | 5/10            |
| WEIGHTS                       | Attachment width, min – max (mm)                          | V mm  |              | 6070 / 12190  |                 |                 |
|                               | Hydraulic slewing (°)                                     | °   |              | ±3  |                 |                 |
|                               | Sideshift, ± either side center (mm)                      | V1 mm                                       |              | 400   |                 |                 |
|                               | Leveling  | °   |              | ±5  |                 |                 |
|                               | Service weight*   | kg  | 71500        | 73500   | 74300           | 77300           |
| WHEELS                        | Axle load front   | Unloaded                                    | kg           | 43000   | 45000           | 45800           |
|                               |   | At rated load, retracted - extended         | kg           | 101500 - 102800   | 103500 - 104800 | 104300 - 105600 |
|                               | Axle load rear  | Unloaded                                    | kg           | 28500   | 28500           | 28500           |
|                               |   | At rated load, retracted - extended         | kg           | 11000 - 9700  | 211000 - 9700   | 11000 - 9700    |
| AXLES                         | Wheels*   | Number of wheels, front – rear (x = driven) |              | 4x – 2  |                 |                 |
|                               | Tyres   | Pneumatics, type / pressure (front – rear)  |              | Diagonal / 1.0  |                 |                 |
|                               |   | Dimensions, front + rear                    | tum          | 18.00x33"   |                 |                 |
|                               | Rims  | Dimensions, front + rear                    | tum          | 13.00x33" / 2.5   |                 |                 |
| HYDRAULICS                    | Steer axle  | Manufacturer, type - designation            |              | Kalmar steer axle / Power steering / Double acting single cylinder    |                 |                 |
|                               | Drive axle  | Manufacturer, type - designation            |              | Kessler D102 Differential and hub reduction                           |                 |                 |
|                               | Service brakes  | Type – affected wheels                      |              | Oil cooled wet disc brakes (WDB) / Drive wheels                       |                 |                 |
|                               | Parking brake   | Type – affected wheels                      |              | Single dry disc / Spring activated - hydraulic release / Drive wheels |                 |                 |
|                               | Hydraulics  | System type / pump type                     |              | Load-sensing / Power-on-demand / Piston pumps                         |                 |                 |
|                               | Oil pressure  | Max working pressure                        | MPa          | 20  | 21              | 21              |
|                               | Tank  | Oil volume                                  | Lit          | 165   | 165             | 165             |
|                               |   | Fuel tank, capacity                         | Lit          | 850   | 850             | 850             |
|                               |   | AdBlue tank, capacity                       | Lit          | 65  | 65              | 65              |

\* Wide drive axle available as option; truck width 4900mm.

Note: Information is subject to change.



# Performance

| Models |   |                              | DCG410GS                     | DCG410GS             |
|--------|---|------------------------------|------------------------------|----------------------|
| SPEEDS | Volvo engine                                  |                              | TAD1151VE (3A <sup>2</sup> ) | TAD1181VE (EU5 / 4F) |
|        | Travel speed, forward - reverse               | Unloaded / at rated load     | km/h                         | 27 - 20 / 18 - 18    |
|        | Lifting speed                                 | Unloaded / at rated load 70% | m/s                          | 0.43 / 0.27          |
|        | Lowering speed                                | Unloaded / at rated load     | m/s                          | 0.45 / 0.50          |
| POWER  | Gradeability, max                             | Unloaded                     | %                            | 47                   |
|        |   | At rated load                | %                            | 28                   |
|        | Gradeability, at 1 mph                        | Unloaded                     | %                            | 33                   |
|        |   | At rated load                | %                            | 20                   |
| SOUND  | Drawbar pull                                  |                              | kN                           | 312                  |
|        | Noise level, inside (with EDM <sup>1</sup> )  | EN12053, LpAZ                | dB(A)                        | 72 - 75              |
|        | Noise level, outside (with EDM <sup>1</sup> ) | EN12053, LWAZ                | dB(A)                        | 105 - 108            |
|        | Noise level, outside (with EDM <sup>1</sup> ) | 2000/14/EC, LWAZ             | dB(A)                        | 108 - 111            |

1. With Eco Drive Mode (EDM) drivetrain settings included. Eco (1600 rpm), Normal (1800 rpm).

2. Tier 3 engines are not for sale nor use in US/Canada or territories thereof.

# Drivetrain

| Models       |  |                        | DCG410GS                             | DCG410GS                             |
|--------------|--|------------------------|--------------------------------------|--------------------------------------|
| ENGINES      | Wheelbase                                    | mm                     | 6000                                 | 6000                                 |
|              | Drive motor, manufacturer - type designation |                        | Volvo TAD1151VE <sup>3</sup>         | Volvo TAD1181VE                      |
|              | Fuel types, motor type <sup>1</sup>          |                        | Diesel / HVO / 4-stroke              | Diesel / HVO / 4-stroke              |
|              | Turbo charger / cooling                      |                        | Turbo (FGT) + Intercooler            | Turbo (FGT) + Intercooler            |
| TRANSMISSION | Engine after treatment type <sup>2</sup>     |                        | No AdBlue, DOC, SCR or DPF           | With AdBlue, DOC and ASC             |
|              | Diesel particle filter (DPF)                 |                        | No DPG                               | With DPF                             |
|              | Emission standards                           |                        | EU Stage IIIA / EPA Tier 3           | EU Stage V / EPA Tier 4-Final        |
|              | Rated power / at revs (ISO 3046)             | kW / rpm               | 265 / 2100                           | 265 / 2100                           |
| TRANSMISSION | Peak power / at revs (ISO 3046)              | kW / rpm               | 265 / 1448 - 2100                    | 265 / 1500 - 2100                    |
|              | Peak torque / at revs (ISO 3046)             | Nm / rpm               | 1785 / 1260                          | 1785 / 1300                          |
|              | Number of cylinders / displacement           | lit (in <sup>3</sup> ) | 6 / 10.8 (661)                       | 6 / 10.8 (661)                       |
|              | Fuel consumption, normal driving             | lit/h                  | 15 - 20                              | 15 - 20                              |
| TRANSMISSION | AdBlue consumption, normal driving           | %                      | -                                    | 4 - 6                                |
|              | Manufacturer's type designation              |                        | Dana LTE-30500                       | Dana LTE-30500                       |
|              | Clutch, type                                 |                        | Torque converter with Lock-up clutch | Torque converter with Lock-up clutch |
|              | Gearbox, type                                |                        | Hydrodynamic Powershift              | Hydrodynamic Powershift              |
| TRANSMISSION | Eco Drive Mode (EDM) drivetrain settings     |                        | 3 modes / Eco, Normal & Power        | 3 modes / Eco, Normal & Power        |
|              | Numbers of gears, forward / reverse          | gears                  | 5 / 3                                | 5 / 3                                |
|              | Alternator, type / power                     | W                      | AC / 3080 (28V x 110A)               | AC / 3080 (28V x 110A)               |
|              | Starting battery, voltage / capacity         | V / Ah                 | 2x12 / 145                           | 2x12 / 145                           |

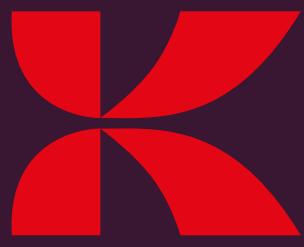
1. Regular diesel based on EN590 (ASTM D975 no. 2-D). Synthetic / paraffinic diesel based on EN 15940.

2. AdBlue / Diesel Exhaust Fluid (DEF) doser unit. Diesel Oxidation Catalyst (DOC). Diesel Particulate Filter (DPF). Selective Catalyst Reduction (SCR). Ammonia Slip Catalyst (ASC).

3. Tier 3 engines are not for sale nor use in US/Canada or territories thereof.

Note: Information is subject to change.





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2025.04.22

