



Kalmar Top Loader

# Making your life easier.

DCG400GS-410GS

 **KALMAR**

# It's an easy choice to make.

Our new top loaders deliver on so many fronts. They are reliable, safer and easier to maintain and operate, making them a very easy choice to make.

#### **A common platform makes things easier.**

With over 10,000 machines now built on our G-Generation platform, you can expect your new Kalmar Top Loader 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 system 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.



*Easier to operate with our ergonomically designed cabin.*



*Service and maintain with easy access hatches.*



## A robust, hard working machine.

Kalmar solutions are known for their reliability and durability and our new 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 to operate.

Our new top loader 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.

A-posts have been replaced with slim B-posts, to provide greater visibility in all directions: forward, rearward, upward and to the side. Our combined roof/front wiper system cleans a bigger area of the front windscreen 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 levers or an optional 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 colour display at its heart. Advanced diagnostics allows for greater operational control and safety.

# 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.



#### 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.



#### off your fuel costs and emission.

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.



#### more in fuel costs and emissions.

All of our top loaders are fitted with a lock-up gear-box 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.



#### 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%.



## Kalmar Training Centre.

There are many ways that your drivers can operate their top loader more effectively without compromising on their productivity. The Kalmar Training Centre offers a range of courses that can help your driver operate their machine more efficiently, helping to further reduce your fuel bill and emissions.



# Easier to maintain.

Our new range of top loaders 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 Kalmar Insight\*, and MyKalmar can provide your drivers with a daily service check list to make sure nothing is missed.

### 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 from either side, 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.



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



# Choose your own upgrade 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.



### 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.



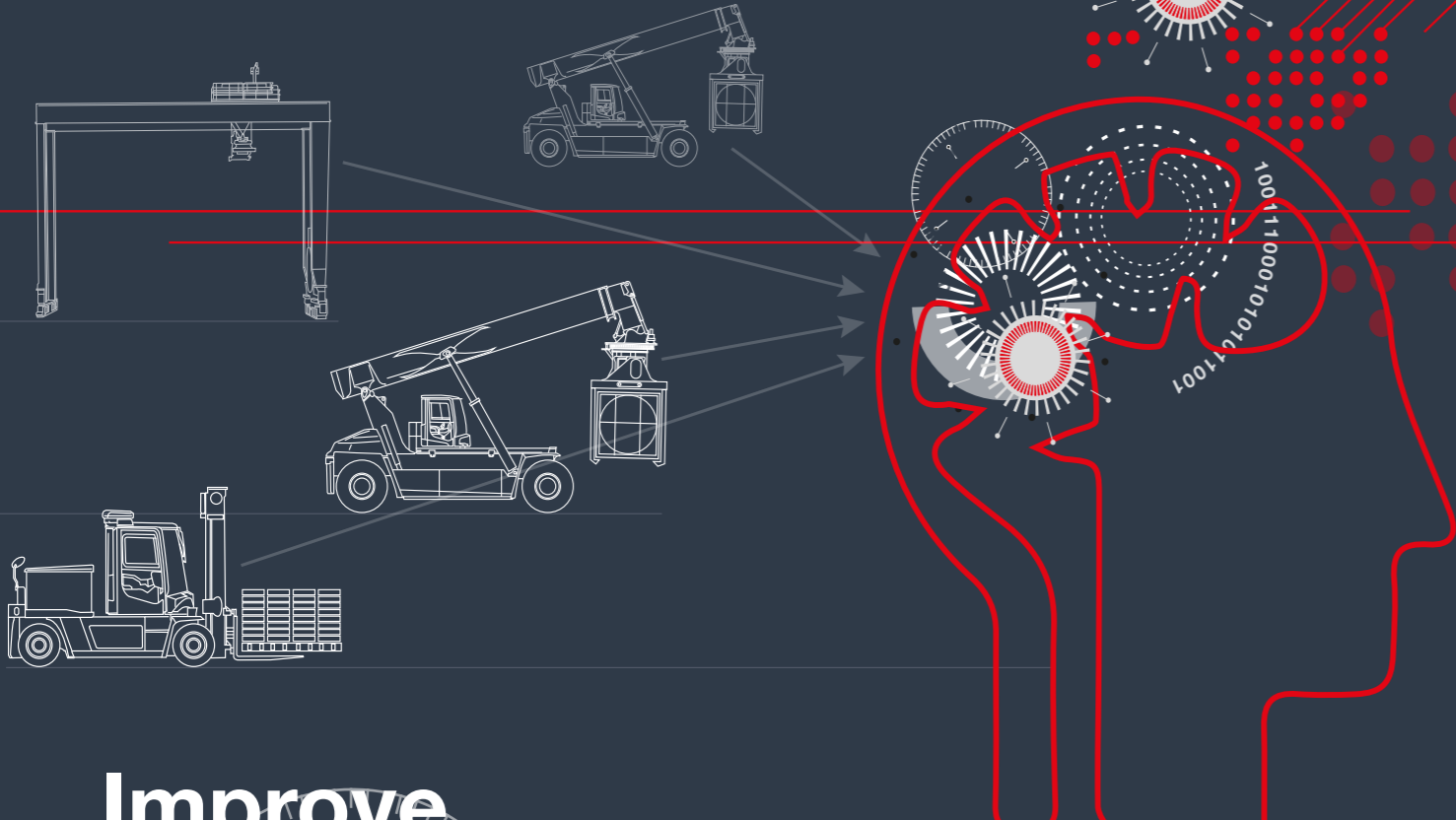
### Additional lighting.

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, on the mast or placed at the front or rear of your top loader.



### Reversible Engine Fan.

If your top loader needs to operate in a dirty and dusty environment then a reversible fan can help keep your radiator cleaner and operating optimally.



# Improve your fleet performance.

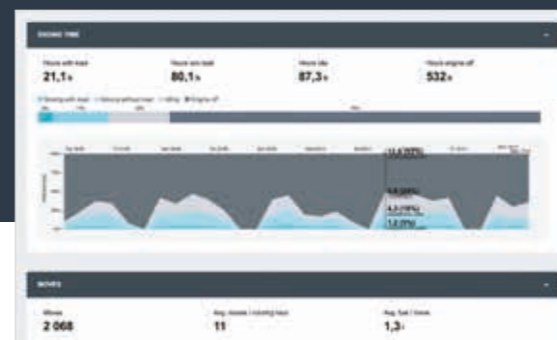
## Optimise your equipment with Kalmar Insight.

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

Kalmar Insight\* comes fitted in all new Kalmar machines and can be retrofitted to existing Kalmar machines or those built by other manufacturers.



Access on mobile, tablet or traditional screen.



View each machine's movements as they occur.



Plan your maintenance and spare parts needs.



View each driver's performance in real time.

# Kalmar Care.

## Making sure your business never stops.

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

## When the right part matters.

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

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

### The four flexible types of service contracts.

#### Kalmar Support Care

We support your maintenance processes on demand.

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

#### Kalmar Essential Care

We perform your agreed maintenance tasks proactively.

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

#### Kalmar Complete Care

We meet your complete maintenance requirements.

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

#### Kalmar Optimal Care

We optimise your business performance.

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

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

# Technical information.

		DCG400GS 4/4	DCG400GS 5/5	DCG400GS 6/5	DCG410GS 4/4	DCG410GS 5/5	DCG410GS 6/5	DCG410GS 6/6	
<b>MAIN DATA</b>	Power source	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	
	Lifting capacity, rated (kg)	40000	40000	39000	41000	41000	41000	41000	
	Lifting capacity reduced, >5 high	-	-	34000	-	-	34000	34000	
	Lifting height, number of containers 8'6"/9'6"	4/4 high	5/5 high	6/5 high	4/4 high	5/5 high	6/5 high	6/6 high	
<b>WEIGHTS</b>	Service weight (kg)	69300	71300	72100	71500	73500	74300	77300	
	Axle load front, unloaded (kg)	41000	43000	43800	43000	45000	45800	46800	
	Axle load front, at rated load (kg), retracted - extended	98000 - 99400	100000 - 101400	99400 - 100700	101500 - 102800	103500 - 104800	104300 - 105600	105300 - 106600	
	Axle load rear, unloaded (kg)	28300	28300	28300	28500	28500	28500	30500	
<b>WHEELS</b>	Axle load rear, at rated load (kg), retracted - extended	11300 - 9900	11300 - 9900	11700 - 10400	11000 - 9700	11000 - 9700	11000 - 9700	13000 - 11700	
	Type	Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic	
	Tyre size	18.00 x 25	18.00 x 25	18.00 x 25	18.00 x 33	18.00 x 33	18.00 x 33	18.00 x 33	
	Number of tyres front / rear (x = driven wheels)	4x / 2	4x / 2	4x / 2	4x / 2	4x / 2	4x / 2	4x / 2	
<b>DIMENSIONS</b>	Track (c-c), front - rear (mm)	S1 - S2	3030* - 2625	3030* - 2625	3030* - 2625	3030* - 2815	3030* - 2815	3775* - 2815	
	Mast tilting, forward - backward (°)	∂ - β	5 - 10	5 - 10	5 - 10	5 - 10	5 - 10	3 - 10	
	Mast height, min. (mm)	H3	7450	8950	9450	7550	9050	9550	10450
	Lifting height under twistlocks (mm)	H4	12060	15060	16060	12160	15160	16160	17960
<b>MISC.</b>	Height under twistlocks, min. (mm)	H10	2060	2060	2060	2160	2160	2160	2160
	Mast height, max. top of spreader (mm)	H5	14020	17020	18020	14120	17120	18120	19920
	Height of machine, cabin (mm)	H6	4800	4800	4800	4900	4900	4900	4900
	Seat height, (mm)	H8	3750	3750	3750	3850	3850	3850	3850
	Length of truck (mm)	L	11000	11000	11000	11000	11000	11000	11000
	Distance front axle / front edge of mast (mm)	L2	935	935	935	935	935	935	935
	Wheelbase (mm)	L3	6000	6000	6000	6000	6000	6000	6000
	Load centre (mm)	L4	1625	1625	1625	1625	1625	1625	1625
	Load centre with extended spreader (mm)	L7	1825	1825	1825	1825	1825	1825	1825
	Width of truck (mm)	B	4150*	4150*	4150*	4150*	4150*	4150*	4900
	Ground clearance, min. under truck (mm)		240	240	240	300	300	300	300
	Turning radius, outer (mm)	R1	8650	8650	8650	8650	8650	8650	8650
	Turning radius, inner (mm)	R2	1200	1200	1200	1200	1200	1200	1200
	Min. aisle width for 90° stacking with 20' container (mm)	A1	12600	12600	12600	12600	12600	12600	12600
	Min. aisle width for 90° stacking with 40' container (mm)	A2	14600	14600	14600	14600	14600	14600	14600
	Attachment width, min - max (mm)	V	6060 - 12190	6060 - 12190	6060 - 12190	6060 - 12190	6060 - 12190	6060 - 12190	6060 - 12190
Hydraulic slewing (°)		±3	±3	±3	±3	±3	±3	±3	
Sideshift, ± either side centre (mm)	V1	400	400	400	400	400	400	400	
Levelling (°)		±5	±5	±5	±5	±5	±5	±5	
<b>MISC.</b>	Max hydraulic pressure (Mpa)		20	21	20	20	21	22	
	Hydraulic oil tank, capacity (l)		600	600	600	600	600	600	
	Fuel tank, capacity (l)		850	850	850	850	850	850	
	Urea (DEF/AdBlue) tank, capacity (l)		65	65	65	65	65	65	

\* Wide drive axle available as option; Truck width (mm) 4900, Track (c-c) front (mm) 3775

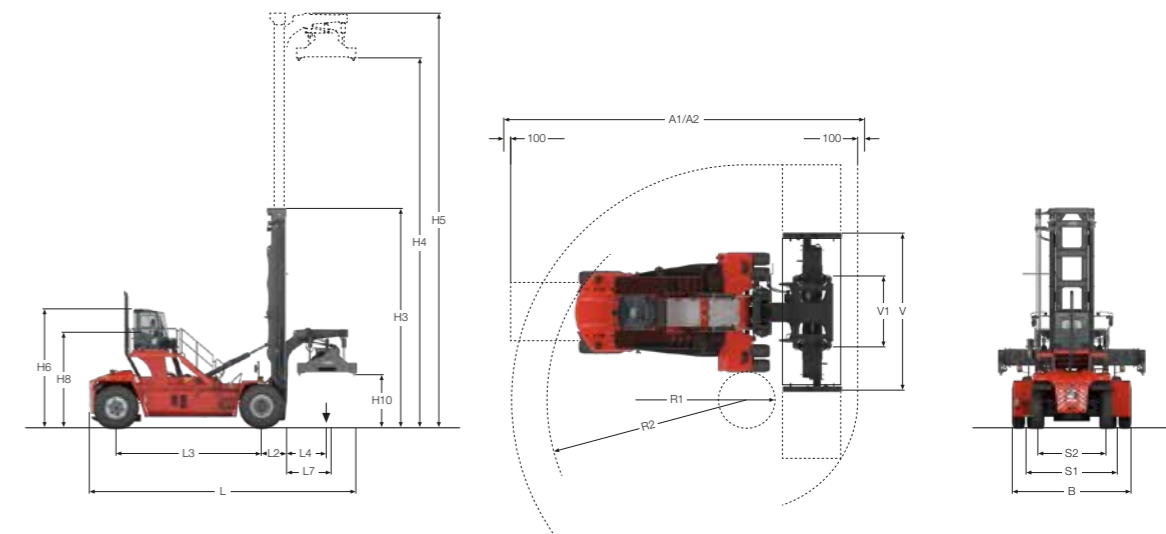
## Performance.

		Volvo TAD1151VE (3A) / TAD1171VE (4f)	Volvo TAD1151VE (3A) / TAD1171VE (4f)
<b>Tyres</b>	Unloaded (m/s)	0.43	0.43
<b>Performance</b>	At 70% rated load (m/s)	0.27	0.27
<b>Lifting speed</b>	Unloaded (m/s)	0.45	0.45
	At rated load (m/s)	0.5	0.5
<b>Lowering speed</b>	Unloaded (km/h)	27 / 20	27 / 20
	At rated load (km/h)	25 / 18	27 / 18
<b>Traveling speed, F/R</b>	Unloaded (%)	47	57
	At rated load (%)	28	33
<b>Gradeability, max.</b>	Unloaded (%)	33	38
	At rated load (%)	20	23
<b>Gradeability, at 2km/h</b>	Max. (kN)	312	350
	At rated load (%)	20	23
<b>Drawbar pull</b>	Max. (lbf)	70140	78680

## Drivetrain.

		Volvo TAD1151VE	Volvo TAD1171VE	
<b>ENGINE</b>	Manufacturer's type designation	Volvo TAD 1151VE (Turbo-Intercooler)	Volvo TAD 1171VE (Turbo-Intercooler)	
	Fuel, type of engine	Diesel, 4-stroke	Diesel, 4-stroke	
	Rating ISO 3046 / at revs	kW / rpm	265 / 1448-2100	265 / 1448-2100
	Peak torque ISO 3046 / at revs	Nm / rpm	1785 / 1260	1785 / 1260
	Number of cylinders / displacement	cm³	6 / 10800	6 / 10800
	Fuel consumption, normal driving	l/h	17-20	17-20
	AdBlue consumption, normal driving	% of diesel	N/A	3-5
Emission standard		EU Stage IIIA / US EPA Tier 3*	EU Stage IV / US EPA Tier 4f	
<b>GEARBOX &amp; MISC</b>	Manufacturer's type designation	Dana TE30500	Dana TE30500	
	Clutch, type	Torque converter with Lock-up	Torque converter with Lock-up	
	Gearbox, type	Hydrodynamic Powershift	Hydrodynamic Powershift	
	Numbers of gears, forward / reverse		5 / 3	5 / 3
	Alternator, type / power	W	AC / 3080	AC / 3080
	Starting battery, voltage / capacity	V / Ah	2x12 / 145	2x12 / 145
	Driving axle, manufacturer / type		Kessler D102 / Differential and hub reduction	Kessler D102 / Differential and hub reduction

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





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