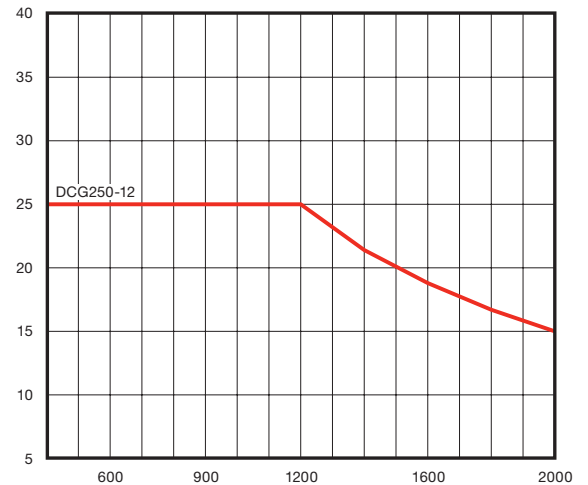
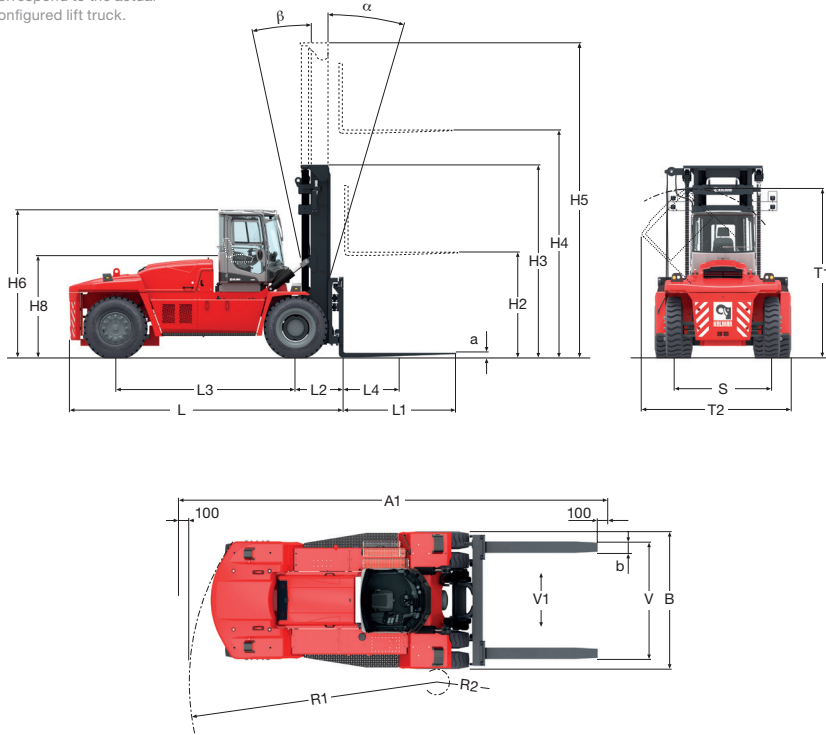


**DCG250-12 | Cummins QSB-6,7 (164 kW) / Dana TE17000 | Duplex, clear view, standard - LH 4500**

<b>Lifting data</b>	<b>DCG250-12</b>
Lifting capacity, rated (kg)	25000
Lifting speed L4, unloaded – at 70% of rated load (m/s)	0,33 - 0,32
Lowering speed L4, unloaded – at rated load (m/s)	0,38 - 0,38
<b>Driving data</b>	
Travelling speed forward, unloaded – at rated load (km/h)	25 - 22
Travelling speed backward, unloaded – at rated load (km/h)	25 - 22
Gradeability max., unloaded – at rated load (%)	60 - 29
Gradeability at 2 km/h, unloaded – at rated load (%)	41 - 22
Drawbar pull, max. (kN)	173
<b>Weight of truck</b>	
Service weight (kg)	33400
Axle load front, unloaded – at rated load (kg)	16000 - 54400
Axle load rear, unloaded (kg)	Axle load rear, unloaded (kg)
Axle load rear, at rated load (kg), retracted - extended	Axle load rear, at rated load (kg), retracted - extended
Axle load rear, unloaded – at rated load (kg)	17400 - 4000
<b>Engine</b>	
Manufacturer / model	Cummins / QSB-6,7
Fuel / type of engine	Diesel / 4 stroke
Emission stage / approval	EU Stage III / EPA Tier 3
Number of cylinders / displacement (l)	6 / 6,702
Max. rpm in machine	2000
Power rated / max @ revs, ISO 3046 (kW / rpm)	164 / 2200
Torque max @ revs, ISO 3046 (Nm / rpm)	949 / 1500
Alternator, type - power (W)	AC - 1960
Starting battery, voltage - capacity (V – Ah)	2×12 - 145
Fuel consumption, normal driving (l/h)	9-11
<b>Transmission</b>	
Manufacturer / model	Dana / TE17000
Clutch, type	Torque converter
Gearbox, type	Hydrodynamic Powershift
Number of gears, forward - reverse	3 - 3
Driving axle, manufacturer / type	Kessler D91 / Differential and hub reduction
<b>Wheels</b>	
Type	Pneumatic
Dimension, front – rear (inch)	14.00×24 – 14.00×24
Number of wheels, front – rear (*driven)	4* - 2
Pressure (MPa)	1,0
<b>Miscellaneous</b>	
Steering system, type – maneuvering	Hydraulic servo - Steering wheel
Service brake system, type – affected wheels	Oil cooled disc brakes (Wet disc brakes) - Drive wheel
Parking brake system, type – affected wheels	Dry, spring activated disc brakes - Drive wheel
Max. hydraulic pressure (MPa)	22,0
Noise level EN12053 with ECO modes - equivalent inside cabin LpAZ (dB(A))	72
Noise level EN12053 with ECO-modes - equivalent outside cabin LwAZ (dB(A))	109
Fuel volume (l)	375
Hydraulic oil volume (l)	330

Illustrations does not correspond to the actual configured lift truck.



## Dimensions

Length of truck (mm)	L	6350
Width of truck (mm)	B	3050
Height of basic machine (mm)	H6	3270
Height of seat (mm)	H8	2150
Wheelbase (mm)	L3	4250
Load centre (mm)	L4	1200
Track (c-c), front – rear (mm)	S	2200 - 2140
Turning radius, outer – inner (mm)	R1-R2	5875 - 550
Ground clearance, min. (mm)		300
Max. height when tilting cab (mm)	T1	3800
Max. width when tilting cab (mm)	T2	3700
Min. aisle for 90° stacking with forks (mm)	A1	9550
Lifting height (mm)	H4	4500
Mast height, min. (mm)	H3	4070
Mast height, max. (mm)	H5	6320
Tilting of mast, forward - backward (°)	$\alpha$ - $\beta$	5 - 10
Fork width (mm)	b	250
Fork thickness (mm)	a	110
Length of forkarm (mm)	l	2400
Width across fork arms, max. - min. (mm)	V	2700 - 800
Sideshift $\pm$ at width of across fork arms (mm)	V1-V	557 - 1585

The design and materials specification are subject to alternation without prior notice.  
Tolerances according to K-standard 95430.0008/0009

Kalmar offers the widest range of cargo handling solutions and services to ports, terminals, distribution centres and to heavy industry. Kalmar is the industry forerunner in terminal automation and in energy efficient container handling, with one in four container movements around the globe being handled by a Kalmar solution. Through its extensive product portfolio, global service network and ability to enable a seamless integration of different terminal processes, Kalmar improves the efficiency of every move. [www.kalmarglobal.com](http://www.kalmarglobal.com)

Kalmar is part of Cargotec. Cargotec's sales in 2018 totalled approximately EUR 3.3 billion and it employs around 12.000 people. [www.cargotec.com](http://www.cargotec.com)



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# Kalmar 18 – 52 tonnes It's hard to resist perfection







## Your choice has to pay-off

Whether you need to invest in a single machine or a fleet of machines for your heavy industrial handling – you can't avoid the cost factor.

Some companies may focus more on the investment cost or financial capability, others may focus on life-cycle

cost. Some operations focus on operational cost because they are more dependant on day-to-day operational excellence.

No matter if your company is small or big, operates domestically or globally, looks for standard or tailored solu-

tions, manages its maintenance or needs a flexible financial solution. In one way or another, your choice has to pay-off. And we will be there to meet your needs.



This has been the main goal for us to present the F generation of Heavy Lift Trucks 18 – 52 tonnes from Kalmar to you. A refined and fully loaded version backed by more than 50 years of experience in heavy handling.

This is a machine delivering top of the line performance in every aspect. We have secured absolute top performance when it comes to machine reliability, low operational cost and of course the ability to customer and operational tailoring.

Spiced with Cargotec's powerful service concept and customer-close network, it's hard to beat.









# Boosts your drivers and your profits

Real ergonomics means more efficient drivers and less risk for damages and accidents. That's it. But the consequence is increased profits and decreased costs for the company. And of course a highly attractive environment for your employees. Who can say no thanks to that?

The ergonomic history in the lift truck business is more or less written by Kalmar. The origin comes from the high demand among Swedish drivers as well as governmental regulations. The refinement has been going on since the mid 70s.

## **Ergonomics**

Ergonomics for Kalmar means perfect vision. Let the driver concentrate on the task instead of trying to see what's going on. Ergonomics also

means perfect cab layout. Let the driver become excellent instead of getting frustrated on bad instrumentation, lever location or an uncomfortable seat. Ergonomics finally means a fit driver even after a full day's intensive shift.

## **Bottom line**

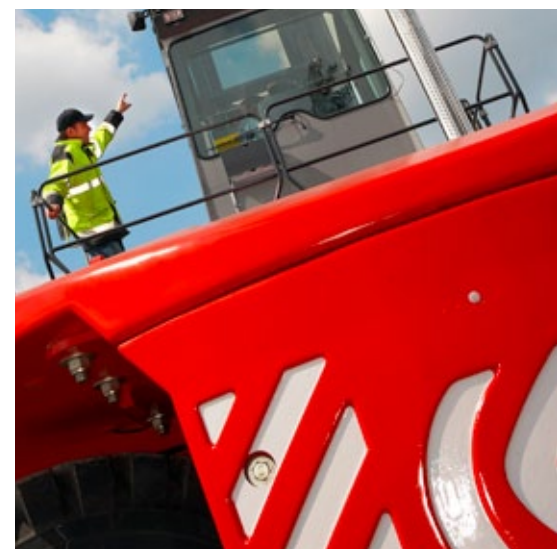
There are many scientific investigations telling the truth – ergonomics is good for the bottom line.

## **Most drivers may have more to learn**

Cargotec offers all our customers, and others as well, to take part of our appreciated Operator Training Programme. The goal is to convey skills which result in safe, economic and efficient handling.

### **Some of the benefits:**

- Increased safety
- Increased productivity
- Reduced wear and tear
- Reduced operating/running costs



# Just much more productive

Real performance starts up with a powerful machine design and ends up with an excellent driver. That's it. But the consequence is top productivity potential and therefore a tremendous opportunity for you to finetune your production or distribution logistics. One strong contributing link.

Performance in the heavy lift truck business is a little bit like wrestling. Imagine sitting on top of a 50 tonne powerpack, handling a 40 tonne steel bar, forced to turn around on a coin and still needing to finish in only two minutes. Then, there's the next load.

## **Trust the machine**

You have to trust what you have in your hands. Over and over again. You have to believe that this machine responds exactly to any of your actions,

without taking the risk of exceeding the limits of your personal or operational safety.

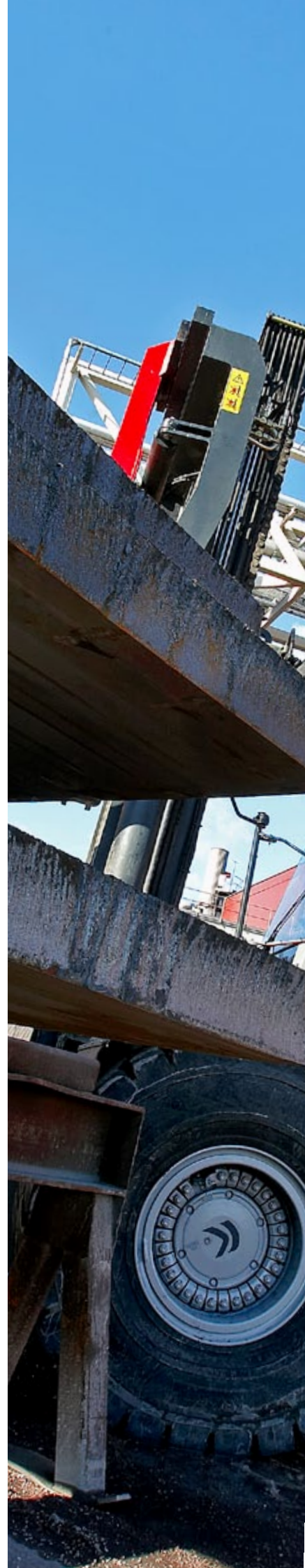
## **Tomorrows needs**

You have to trust what you have got in the handling yard. Even on days when the sun is shining somewhere else, you have to believe that this machine is capable of matching all your handling needs and requirement – today and over the years.

## **What you see is what you get**

The F generation Heavy lift trucks is not only the result of a specialised and top skilled engineering team within Kalmar. They have also been strongly guided by the overall Kalmar Product Design Strategy.

This strategy sets pressure on anyone within Kalmar to work with the one and only single focus – put a machine on the market which satisfies or exceeds the expectations of the customers. Make sure it is ahead of any competition. Provide value for money. And the way you see the machine should reflect what you get.







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# Think more, think green

If you consider environmental issues are important you may consider even more what's behind the machine. But first, some machine details. The Kalmar F generation copes with or exceeds all the toughest regulations and business standards according to exhaust emissions, lubrication waste, coatings, driver environment and noise levels. Optimised for the environment.

**Taking environmental responsibility** means, to us at Cargotec, to take full responsibility. Therefore we often exceed the regulation figures given by authorities. We take active part of the general development of environmental issues in the business.

## **Total environment**

Environmental thinking starts, for us, already at the design and production planning stage. We have to optimise the total environmental strain resulting from our entire operations and not only fulfilling what is the absolute minimum for a specific machine.

## **There is more than the greenhouse effect**

Environmental responsibility is one of Cargotec's strategic pillars and our policies are implemented all through the entire organisation – worldwide.

We have the goal to minimise the environmental impact in any aspect – from the development and production of products all through its life-cycle.

## **Front position**

In many cases we have developed new products in which the environment has been the dominating force to succeed on the international marketplace. And our global parts- and service supply chain has given us opportunities to become a good environmental partner to you as well.

## **Machine optimisation**

The Kalmar F generation gives you extra long service intervals, low noise emissions, minimised vibrations and very limited exhaust emissions. And when we say low noise or low emissions, we also mean the good surrounding environment.



# Optimise your cost control

Low running expenses means much more than low fuel consumption or less tyre wear. Of course fuel and tyres matter when calculating the basic running expenses, but regardless that, there are an awful lot of different conditions and details as well to consider when you make a cost evaluation.

Let us give you some clues.

What about having the ultimate maintenance- and parts network backing you up already from the delivery day? We have planned and prepared thoroughly to minimise your total running cost from start.

## Cost optimisation

Not only by extending the service intervals in general, developing maintenance-free systems or central lubrication points, easy access for maintenance actions, using the

same tyre dimension on all wheels and so on.

## Machine monitoring

No, we give you access to the most sophisticated and reliable machine monitoring and control system available in the market, as well as the documentation system. For you it is simply to open up the door to a new world of cost control and uptime optimisation.

## We never let our customers fight on their own, if they don't want to

The reason is simple – corporations want to be sure of long term capabilities by their partners. Here are some options appreciated by our customers:

- Service and maintenance training programmes.
- Senior technical training.
- Contract maintenance – from basic to full assignment.
- Flexible financing options.

## Remote machine optimisation

Through Kalmar's Remote Machine Interface (RMI) you will have a tremendous tool available to remotely monitor your complete machine fleet. You will also get access to valuable data for operational- and maintenance analysis and improvements.







Warnings and errorcodes will be presented to the operator through the information display to prevent costly damage and to minimise the unplanned maintenance.

Consumables can be ordered in kits to make the pre-defined preventive maintenance actions easy.









# Innovative design already proven

If we say that Kalmar Heavy lift trucks comprises the experience of 2.000 predecessors. Would you trust us then? Well, experience does not explicitly mean a direct benefit for anyone, unless you catch the pros and cons and systematically utilise that knowledge to develop and provide something much more beneficial. So here we are.

**We can't resist telling you that the F generation Kalmar Heavy Lift Trucks are partly based on the experience of the most successful handling machine story ever – the container reach stacker, developed and refined to its excellence over the years by Cargotec.**

## **Field proven**

Based on our long story of heavy lift trucks in operation all over the world, we have learned about the kind of stresses the main components and systems are prepared to

stand – mechanical stress, temperature stress, etc. We have used the same components in the F generation Kalmar Heavy Lift Trucks.

## **Important feedback**

We have continuously gathered feedback from the front lines which have helped us to create an enormous knowledge bank covering handling situations and conditions, quality parameters, system functionality, operational and maintenance information. If you ask us, we can tell you all the truths.

## **The African desert and Siberian tundra has an important story to tell you**

What we are trying to say is that Cargotec's development team has met almost any type of operational condition to cope with. All challenges, machine stresses and impossible problems have been faced and learned from. And solved.

The global distribution of our heavy duty machines has told us that things are different in different parts of the world, countries, regions and even between specific customers. Not only climate, but operational environment, handling applications or working cultures differ.

We have built in all this experience in the F generation of heavy lift trucks and it is pronounced flexibility. Flexibility to any of your conditions.







# We like machines, that fit your needs

We like steelworks, concrete or stone industries, container terminals, saw-mills, stevedoring or RoRo operations because they differ. Our application knowledge and customisation ability is a valuable offer to you.

And we apply to your specific requirements.

Any heavy duty handling need or logistics solution, or whatever your business, we have the experience and capability to provide a solution to leverage your productivity.

We offer you a great flexibility already in the standard machine specification – wheelbase, mast alternatives, carriages, attachments, auxiliaries. You tell us your needs and we configure your machine or fleet of machines.

## **Support solutions**

We offer you a great flexibility and exclusive options when it comes to support – maintenance and parts solutions, driver- and technical staff training, operational monitoring services and so on. We design the right package according to your existing and future needs.

## **Financial solutions**

This is an important part of the package covering financial bonds, machine hire, rental or even operational buy-outs as part of a larger business agreement.

Combining these three offers, we believe you have a great opportunity to secure a successful operational business in heavy handling. Never hesitate to utilise our broad experience, skills and resources to get what you really need.

Ask for partnership.

Global presence and local service bring  
our products and solutions closer to our customer.



*Cargotec improves the efficiency of cargo flows on land and at sea – wherever cargo is on the move.  
Cargotec's daughter brands Hiab, Kalmar and MacGregor are recognised leaders in cargo and load handling  
solutions around the world. Cargotec's global network is positioned close to customers and offers extensive  
services that ensure the continuous, reliable and sustainable performance of equipment.  
Cargotec's class B shares are quoted on the NASDAQ OMX Helsinki. [www.cargotec.com](http://www.cargotec.com)*



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