

# Give your savings a lift Kalmar DCG90-180



# More effective truck-and-driver teams, greater total lifetime savings

Keeping cargo moving forward is obviously of critical importance. Meanwhile, the performance of your truck-and-driver teams has the most significant impact on cargo handling operations – both day-to-day and over time. That's because truck-and-driver teams directly influence your ability to keep promises, generate future revenue as well as increase lifetime savings.

### Introducing Kalmar DCG90-180

Like all Cargotec solutions, new Kalmar DCG90-180 lift trucks offer greater total lifetime savings by improving the performance of your truck-and-driver teams. DCG90-180 is a range of new Kalmar trucks with a lifting capacity of 9-18 tonnes. Each in the range is designed, built and delivered to keep truck uptime and driver productivity levels high – and keep running, maintenance and lifetime costs low.

### Designed to deliver greater total lifetime savings

It's simple: great truck-and-driver teams save your company time and money every working day – and over

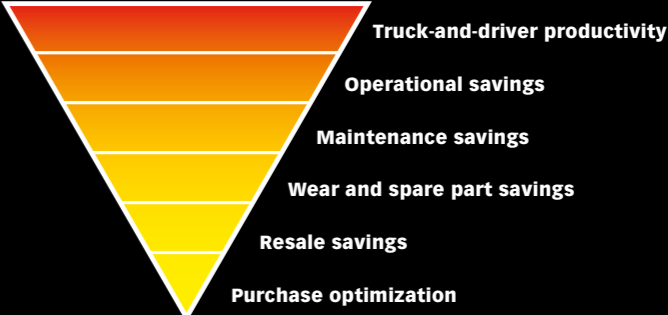
the lifetime of your business. The new DCG90-180 is designed, built and delivered to offer greater total lifetime savings – capitalizing on insights from Cargotec's proven track record of supporting more than 10,000 users of trucks with a lifting capacity of 9-18 tonnes. The DCG90-180 offers superior truck uptime as well as fuel and maintenance savings. As important, it incorporates the best driving environment in any lift truck – our new EGO cabin – loaded with features that inspire driver productivity, efficiency and safety.

### Test drive and start saving

Read the following pages for more details. Or better still; get your drivers to test drive the Kalmar DCG90-180.



**Total lifetime savings**  
The following factors contribute to achieving total lifetime savings while owning, operating and maintaining a fork lift truck. Each DCG90-180 truck helps you meet them all.





# New EGO cabin: our most productive driving environment. Ever.

The new DCG90-180 offers your drivers Kalmar's most productive driving environment – our new EGO cabin. EGO provides a great working environment, ergonomic excellence and productivity-enhancing features. As important its lifting equipment helps boost productivity and lower fuel consumption levels of your truck-and-driver teams – every lift, on every shift.



## EGO cabin enables driver productivity

The new EGO cabin incorporates a spacious curved front window that gives the operator excellent side-to-side and overhead visibility. Operators gain greater operating control and precision thanks to well-placed, ergonomically improved instruments, levers, pedals, panels, switches and display. A closer look shows why the DCG90-180 is such a great working environment. One test drive proves it.

**Ergonomic steering wheel.** Here's an ergonomic twist: Ego's steering wheel is not only adjustable; it can also be tilted to the side. This decreases stress while driving and reversing. Thoroughly tested, it raises the ergonomics bar.

**Comfort pedals.** A new flexible and safe pedal system gives an adjustable pedal angle. The improved ergonomics minimizes strain on the operator's foot. A floor-based solution that gives a hanging pedal feel.

**High capacity wipers.** Provides over 90% surface coverage of the curved front window. Roof wipers have been intelligently integrated. Good visibility and safety even under extreme weather conditions. Tested in extreme conditions in Canada.

**Ergonomic multi-seat.** The rotatable and fully integrated Kalmar seat. Designed and developed for maximum sitting posture, comfort and ergonomics for long shifts and demanding operations.

**Climate package.** Complete and flexible climate control system that matches the high demands of the climate tested EGO cabin. Large air intake, easy filter replacement in the front, well-dimensioned and -designed components provide complete driving comfort and convenience.

**Work console.** A natural extension of the driver's arm. Easy to set, adjust, use and understand. Ergonomic and flexible. Here are all the necessary controls, switches, levers and indicators for effective operations. Clear, well-placed panels. Steering wheel controls for data display as well as the whole control system.

**Operating console.** The complete unit for those who use the mini steering wheel or steering lever. Integrated switch knob. Fully adjustable and individually tested for optimal ergonomics. The steering wheel can be folded forward without limiting visibility.

**Optimized visibility.** Completely new open design with smart profiles and curved front and rear windows. Provides optimized views at all angles, with exceptionally good views diagonally forwards and backwards. And a strong outdoors feeling.

**Improving lifting performance.** The DCG90-180 helps optimize lifting efficiency and lower fuel consumption at the same time, every lift. New electric and hydraulic systems mean quicker response, high lifting speed and increased control. Meanwhile, new load sensing hydraulic pumps improve fuel efficiency. This combination helps drivers be more productive while using less fuel.

Approved by drivers in Canada, Austria and Sweden. DCG90-180 was thoroughly tested in laboratories as well as under extreme and normal operating conditions.





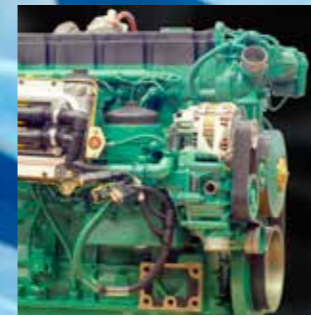


# Increasing productivity of truck-and-driver teams

Ensuring cargo is handled in perfect condition and on time. It's the base for keeping your promises and generating revenue. Meanwhile, ensuring your driver can uphold delivery precision is dependent upon truck uptime. Here are some of the ways DCG90-180 ensures high uptime levels.

## Boosting uptime with smarter electronics

The improved electronic system of the DCG90-180 is a fast, intelligent and stable system that makes the truck user-friendly and reliable. The electronics requires far fewer connection points and cables, which means fewer faults and improved operational reliability. The electronics also incorporate a modern, distributed and redundant CAN-bus (Controller Area Network) that ensures reliability. It monitors the condition and performance of the engine, gearbox, valves and more: controlling 500 measuring points, 50 times every second. This keeps the truck and its engine components operational even in the worst-case scenario. The CAN-bus constantly provides condition-monitoring data via a 3.5" colour display that is placed at eye level in the cabin – so the driver can make well-informed decisions.



## Two new diesel engines meet stricter emission regulations

The Kalmar DCG90-180 offers you the choice of new EU Stage IIIB / EPA Tier 4i emissions compliant diesel engines. From Volvo and Cummins, both cut particulate emissions by 90% as well as reduce nitrogen oxide emissions in half.



A EU Stage IIIB / EPA Tier 4i emissions compliant diesel engine, improved electronics and the new cooling system boost truck uptime.

Both engines improve fuel efficiency whilst maintaining operational reliability, durability or performance. As important, both engines ensure maximum power and torque are available at low rpm.

## Reliable power train

Well-proven drive shaft, transmission system, brakes and other power train units and components are used. For instance, the electronically controlled gearbox allows comfortable, efficient and safe driving at all speeds as well as operating the lifting equipment with high precision.

## Keeping clean and cool to reduce risks of failure

A new cooling system improves uptime and operational reliability of the DCG90-180. It helps keep the engine room cooler, thus promoting a longer lifetime of engine, hydraulic and electrical components. We offer an optional reversible cooling fan that helps keep the radiator clean from potentially harmful dirt, dust or particles.

## Sustainable development

Cargotec works hard to meet or exceed all relevant regulatory standards and legal requirements in our manufacturing operations, across our supply chain as well as in the products we manufacture. All our products comply with the strictest standards for pollution, emissions as well as operator and jobsite health and safety without compromising productivity, reliability or cost effectiveness.



# Turn running costs into operational savings

As you know, no two drivers are identical. This is especially true when it comes to fuel consumption, driving safety and accident avoidance. Of course, even the best driver needs a great truck to help keep these costs low. A range of new features makes it easy to drive DCG90-180 economically and safely – securing savings throughout every shift.

## Reducing fuel consumption

The modern engine in the DCG90-180 really helps drivers reduce costs. Thanks to new advances to decrease inner friction, increase turbulence and improve combustion flows, it improves fuel efficiency without compromising operational reliability, durability or performance. Additionally, maximum power and torque are available at low rpm.

## Helping drivers achieve lower operating costs

The driving style of the driver as well as his knowledge of how to run the forklift considerably impact running costs. Costs due to possible operator abuse or accidents remain all too common factors of a lift truck's financial performance. Some drivers are better at keeping lifetime costs low. Cargotec's Eco-drive training team is ready to offer the right level of support to help your drivers operate their cargo handling equipment in a more productive, safe and economical manner.



A range of new truck and engine features and our Eco-drive training help drivers decrease running costs.



# Improving safety and operating costs



Like all Cargotec equipment, new Kalmar DCG90-180 trucks and EGO cabins are designed to contribute to safe driving, low accident rates as well as low operator misuse, abuse or accidents. In short, the cabin and truck are designed to help drivers stay alert, keep in-tune with the truck as well as the surroundings.

### Improved truck safety features

The new DCG90-180 helps reduce the risk of accidents. It not only meets all current and emerging demands for

operator safety and health. The spacious cabin offers great comfort, visibility and ergonomics. It also provides excellent dynamic stability during quick manoeuvring and when braking hard.

### Promoting driver reaction

The new EGO cabin uses a solid safety cage construction with profiled beams that eliminate blind spots. Its climate package is capable of producing comfort levels similar to a car. The DCG90-180 reduces noise levels through usage of variable pumps, a temperature controlled cooling fan that only runs when needed as well as extensive use of rubber elements (main valve suspension, etc.) that insulate the platform from vibrations. Low emission and noise engines help improve the working environment in and around the DCG90-180. All this improves driver reaction time.



Reducing noise and increasing driving comfort improves safety. This reduces risks of costly accidents occurring.





# Maintenance savings

Extra time and effort to perform routine and daily maintenance is costly. Not only in terms of hourly labour costs. But also in terms of maintenance quality. Skipping difficult-to-perform tasks jeopardizes the truck's reliability, thus leading to costly unplanned stops or downtime. Performing daily inspections and routine servicing is fast, simple and convenient with the new DCG90-180.

## **Saving time and effort**

Accessibility has been dramatically improved for the DCG90-180. Here are just three examples. Smart placement of the electric cabinet offers fast and easy access. All hydraulic oil filters can be reached from above at one location. There's a special drain for shaft oil, for example, which make it possible to fill oil while standing up. As with previous generations of Kalmar trucks, all check points for daily inspection are directly accessible at ground level on the side of the truck.

## **500 hours of driving**

Service intervals for the 9-18 tonne range are after 500 hours of operations. This long service interval meets top industry performance parameters. As important, Cargotec's global presence means we can provide the right level of local support to your maintenance teams.



Service is fast, simple and convenient thanks to improved accessibility and smart features, like the hydraulic filters (middle) and a plug for filling shaft oil while standing (right).





Customizing your DCG90-180 not only ensures a higher average utilization and longer lifetime. It also means ordering a truck that improves total lifetime savings over the short- and long-term.

## More ways to save

Cargotec, the Kalmar brand and customizing your DCG90-180 to suit your exact requirements: all offer you more ways to save. And to deliver greater total lifetime savings.

### **Wear and spare part savings**

The DCG90-180 offers savings by keeping failure rates low and part replacement times fast. Well-proven assemblies, systems, units and components are extensively used in the DCG90-180. Via our extensive distribution network, Cargotec offers simple sourcing and rapid availability of high-quality, original parts. You can count on Cargotec to ensure availability and Just-In-Time delivery are synched to your service intervals from our well-prepared distribution networks and dedicated customer service teams. We stay close to you – wherever you are – to keep your cargo on the move.

### **High resale value**

The quality of Kalmar forklifts is renowned all around the world. This is proven by the high average resale value of a Kalmar internationally. Over 4,000 thousand users have profited from our latest 9-18 range, the E-generation

series, since its introduction. In total, we have delivered some 10,000 trucks with a lifting capacity of 9-18 tonnes. The new DCG90-180 is the continuation of this proven track record – and our commitment.

### **Customization improves purchasing**

The purchase price only represents a small portion of the total cost of ownership of any 9-18 tonne forklift truck. The more years and higher average utilization it offers, the greater your total lifetime savings will become. This is why ordering a truck adapted to suit your individual requirements and application saves you more money over the long-term. Cargotec offers you full capabilities to adapt your machine's chassis, engine, wheelbase, hydraulics, etc. We offer you a complete range of standard and customized lifting equipment – carriage, fork shaft, fork levelling, etc. – and options to match your specific lifting and cargo handling requirements.



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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