

Kalmar

MEDIUM FORKLIFTS



DCG100-180

22,000 - 40,000 lbs capacity



KALMAR

Greater total lifetime **SAVINGS**

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

Introducing Kalmar DCG100-180.

Like all Kalmar solutions, Kalmar DCG100-180 lift trucks offer greater total lifetime savings by improving the performance of your truck-and-driver teams. DCG100-180 is a range of Kalmar trucks with a lifting capacity of 22,000 - 40,000 lbs capacity. Each model 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 DCG100-180 is designed, built and delivered to offer greater total lifetime savings – capitalizing on insights from Kalmar’s proven track record of supporting more than 10,000 users of trucks with a lifting capacity of 22,000-40,000 pounds. The DCG100-180 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.

Total lifetime savings.

The following factors contribute to achieving total lifetime savings while owning, operating and maintaining a forklift. Each DCG100-180 forklift helps you meet them all.



Our most
PRODUCTIVE
driving environment

The DCG100-180 offers your drivers Kalmar's most productive driving environment – our EGO cabin. The EGO cabin provides a great working environment, ergonomic excellence and many productivity enhancing features.

The 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 DCG100-180 is such a great working environment. One test drive will prove 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 flexible pedal system provides an adjustable pedal angle. The ergonomics minimizes strain on the operator's foot. A floor-based solution that gives a hanging pedal feel.

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

Ergonomic multi-seat.

The fully integrated Kalmar seat is designed and developed for maximum sitting posture, comfort and ergonomics for long shifts and demanding operations.

Operating console. Fully adjustable and individually tested for optimal ergonomics. The steering wheel can be tilted forward without limiting visibility.

The optional joystick with built-in travel direction switch is designed to improve driving efficiency. It is optimized for maximum lifting capacity and ergonomically enhanced to reduce arm fatigue.

Optimized visibility. An 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.

Work console. A natural extension of the driver's arm. Easy to set, adjust, and use. 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.

Overhead guard. The EGO cabin is also available as an overhead guard. A simpler, more robust alternative that provides great visibility, safety and ergonomics. Durable and robust for all kinds of weathers.



INCREASING

productivity of forklift-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 your forklift availability. Here are some of the ways DCG100-180 ensures high uptime levels.

Cummins diesel engines meet stricter emission regulations.

The Kalmar DCG100-180 offers you the EU Stage V and Tier 4 Final emissions compliant diesel engines for regulated markets. The Cummins engines cut particulate emissions by 90% as well as reduce nitrogen oxide emissions. The engines improve fuel efficiency whilst maintaining operational reliability, durability or performance. As important, the engines ensure maximum power and torque are available at low rpm.

Powerful hydraulics when you need it.

The variable pumps automatically sense the load in every operation and adjust the oil flow accordingly, allowing for faster lifting cycles while reducing fuel consumption. New electric and hydraulic systems mean quicker response, high lifting speed and increased control. This combination helps drivers be more productive while using less fuel.

Boosting uptime with smarter electronics.

The improved electronic system of the DCG100-180 is a fast, intelligent and stable system that makes the forklift 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 forklift and its engine components operational even in the worst-case scenario. The CAN-bus constantly provides condition-monitoring data via a 7" color display that is placed at eye level in the cabin – so the driver can make well-informed decisions.

Keeping clean and cool to reduce risks of failure.

A cooling system improves uptime and operational reliability of the DCG100-180. It helps keep the engine compartment 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. A perfect option for e.g sawmills or other dusty applications.



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 DCG100-180 economically and safely – securing savings throughout every shift.

Reducing fuel consumption.

Compared to our previous model, the DCG100-180 uses up to 15 percent less fuel* in standard configuration. Add Kalmar's renowned product quality and reliability, increasing efficiency and uptime, and you see the true value of Kalmar.

ECO drive axle – All the power 20% less fuel.

To reduce the fuel consumption further we can offer the DCG100-180 with an optional drive axle and converter. The drive axle and converter is optimized to match the engine's performance and use the engine to its fullest. A lower rpm and an optimized gear ratio lowers the fuel consumption by up to 20% and makes the machine quieter to operate without losing any performance.



ECO drive modes.

Choose between three optional drive modes, each optimized to meet your operational requirements. The forklift can be adapted to every task at hand, shifting many times during the day. The operator easily shifts between modes by using the cabin display screen.

Power. Brings out maximum performance of your machine, allowing you to increase the number of tons moved per hour.

Normal. Balances power and economy to optimize profitability.

Economy. If total cost of operations outweighs the need for performance, Economy mode reduces fuel consumption by up to 15 percent.



FEATURES

and options



Kalmar attachments.

Choose between a wide range of forks and attachments for different applications. We offer complete solutions whereby we assemble the attachment in the factory and integrate it with the truck's other functions.



Heavy duty lift equipment.

Our long experience of extreme applications all over the world has gained us knowledge to optimize our lifting equipment. Kalmar's lifting equipment is by far the most heavy duty lifting equipment available on the market.



Engine options.

Kalmar offers the DCG100-180 with a number of different engine options for regulated and non-regulated markets. Engines from Cummins are available in different ratings.



ECO drive axle option.

A lower rpm and an optimized gear ratio lowers the fuel consumption by up to 20% and makes the machine quieter to operate without losing any performance.



Load sensing hydraulics.

The variable pumps automatically sense the load in every operation and adjust the oil flow accordingly, allowing for faster lifting cycles up to 40 percent while reducing fuel consumption. This will improve your productivity a lot depending on number of lift cycles.



Temperature control fan.

A new cooling system improves uptime and operational reliability of the DCG100-180. It helps keep the engine compartment 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. A perfect option for sawmills or other dusty applications.



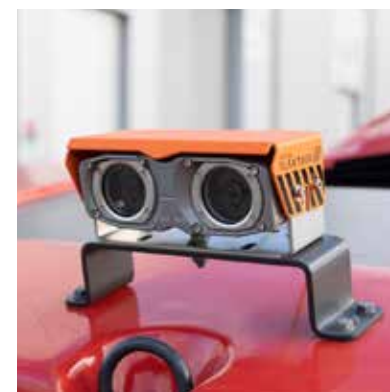
Improving **SAFETY** and operating costs

Like all Kalmar equipment, Kalmar DCG100-180 forklifts 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 forklift are designed to help drivers stay alert, keep in-tune with the forklift as well as the surroundings.

Improved truck safety features.
The DCG100-180 helps reduce the risk of accidents. It not only meets all current and emerging demands for operator health and safety, but it can also be equipped with a number of safety options making the operations as safe as possible.

Turnable driver seat 180° option.
The rotatable seat is a perfect option when driving involves a lot of reversing – a time saving feature, activated by pushing a button, which also protects the driver's neck and shoulders.

Mini-wheel steering / Lever steering options.
Ergonomic steering, precise maneuvering. Saves the driver's shoulders during long shifts.



Making sure your business

NEVER STOPS

Extra time and effort to perform routine and daily maintenance is costly. Not only in terms of hourly labor 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 DCG100-180.

Saving time and effort.

Accessibility has been dramatically improved for the DCG100-180. 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 differential oil, for example, which makes 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 22,000 - 40,000 lbs range are after 500 hours of operations. This long service interval meets top industry performance parameters. As important, Kalmar's global presence means we can provide the right level of local support to your maintenance teams.



Kalmar Insight. Turning data into actionable, impactful insights.

Kalmar 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. This information is then accessed through an easy to use interface that is available on mobile, tablet or more traditional screens.

You can review your entire fleet activities and schedule maintenance activities. All enabling you to take action on real-time information, that will help improve your overall operations immediately. Kalmar Insight is available as an option on all new Kalmar equipment, and can be retrofitted into existing Kalmar equipment or those built by other manufacturers.

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





DRIVETRAIN & PERFORMANCE

ENGINE

Manufacturer's type designation	Cummins B6.7 ZF 3WG171 (225 hp)		Cummins B6.7 ZF 3WG161 (173 hp)	
	Cummins B6.7 (Turbo-Intercooler)		Cummins B6.7 (Turbo-Intercooler)	
Fuel, type of engine	Diesel, 4-stroke		Diesel, 4-stroke	
Rating ISO 3046 / at revs	hp / rpm		173 / 2,200	
Peak torque ISO 3046 / at revs	lbf-ft / rpm		590 / 1,400	
Number of cylinders / displacement	in ³		6 / 409	
Fuel consumption, normal driving	gal/hr		1.8-2.4	
DEF* consumption, normal driving	% of diesel		3-5	
Emission standard	Tier 4 final		Tier 4 final	

GEARBOX & MISC

Manufacturer's type designation	ZF 3WG171		ZF 3WG161	
	Clutch, type	Torque converter		Torque converter
Gearbox, type	Hydrodynamic Powershift		Hydrodynamic Powershift	
Numbers of gears, forward / reverse	3 / 3		3 / 3	
Alternator, type / power	Amp		AC / 110	
Starting battery, voltage / capacity	V / Ah		2x12 / 150	
Driving axle, manufacturer / type	Kessler D81 / Differential and hub reduction		Kessler D81 / Differential and hub reduction	

PERFORMANCE, CUMMINS B6.7 (225 hp)

		DCG 100-6	DCG 120-6	DCG 127-6	DCG 140-6	DCG 150-6	DCG 100-12	DCG 120-12	DCG 150-12	DCG 160-6	DCG 160-9	DCG 160-12	DCG 180-6	DCG70-35 E3	DCG70-35 E4
Lifting speed	Unloaded (ft/s)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.6	2.0
	At 80% of rated load (ft/s)	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.5	1.8
Lowering speed	Unloaded (ft/s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.3	1.3
	At rated load (ft/s)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.6	1.6
Traveling speed, F/R	Unloaded (mph)	18	18	19	19	19	19	19	19	19	19	19	19	19	19
	At rated load (mph)	17	17	17	17	17	17	17	17	17	17	17	17	18	18
Gradeability, max.	Unloaded (%)	103	99	93	87	82	87	79	66	80	70	64	70	60	51
	At rated load (%)	51	47	44	41	39	41	42	35	37	35	33	33	44	39
Gradeability, at 1.2 mph	Unloaded (%)	77	74	70	67	64	67	62	52	62	55	51	56	49	42
	At rated load (%)	42	38	36	34	32	39	35	29	30	29	28	27	36	32
Drawbar pull	Max. (lbf)	28,100	28,100	28,100	28,100	28,100	28,100	28,100	28,100	28,100	28,100	28,100	28,100	28,100	28,100
Noise level, inside	LpAZ**, EGO cabin (dB(A))	71	71	71	71	71	71	71	71	71	71	71	71	71	71
	LpAZ**, EGO OHG (dB(A))	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Noise level, outside	LWA*** (dB(A))	108	108	108	108	108	108	108	108	108	108	108	108	108	108

PERFORMANCE, CUMMINS B6.7 (173 hp)

		DCG 100-6	DCG 120-6	DCG 127-6	DCG 140-6	DCG 150-6	DCG 100-12	DCG 120-12	DCG 150-12	DCG 160-6	DCG 160-9	DCG 160-12	DCG 180-6	DCG70-35 E3	DCG70-35 E4
Lifting speed	Unloaded (ft/s)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.6	2.0
	At 80% of rated load (ft/s)	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.5	1.8
Lowering speed	Unloaded (ft/s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.3	1.3
	At rated load (ft/s)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.6	1.6
Traveling speed, F/R	Unloaded (mph)	18	18	18	18	18	18	18	18	18	18	18	18	19	19
	At rated load (mph)	17	17	17	17	17	17	17	17	17	17	17	17	18	18
Gradeability, max.	Unloaded (%)	74	72	68	65	62	65	60	51	61	54	50	54	48	41
	At rated load (%)	43	37	35	33	31	38	34	28	30	28	27	27	35	31
Gradeability, at 1.2 mph	Unloaded (%)	60	58	56	53	51	53	50	43	50	45	42	45	40	35
	At rated load (%)	36	32	30	28	27	32	29	24	25	24	23	23	30	27
Drawbar pull	Max. (lbf)	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400
Noise level, inside	LpAZ**, EGO cabin (dB(A))	73	73	73	73	73	73	73	73	73	73	73	73	71	71
	LpAZ**, EGO OHG (dB(A))	85	85	85	85	85	85	85	85	85	85	85	85	83	83
Noise level, outside	LWA*** (dB(A))	108	108	108	108	108	108	108	108	108	108	108	108	108	108

* Diesel Exhaust Fluid ** LpAZ according to EN12053 *** LWA according to 2000/14/EC



LIFTING EQUIPMENT

Here is how the DCG100-180 helps drivers optimize lifting efficiency and save fuel – at the same time. To begin with, its electric and hydraulic systems mean quicker response, high lifting speed and increased control. Meanwhile, load sensing hydraulic pumps improve fuel efficiency. Operating together, this combination improves productivity and saves fuel – every lift.

As lifting equipment plays a vital role in the performance of any forklift, it is important yours match your individual requirements and applications. For instance, careful consideration should be made to factors such as lift height, clearance, free lift, carriage flexibility, etc. in order to optimize operations.

Kalmar offers you a complete range of standard and custom lifting equipment – carriage, quick change, forks, leveling, etc – and options to suit your specific lifting and cargo handling requirements.

DUPLIX STANDARD, CLEAR VIEW

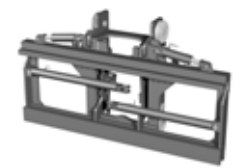
Lift height H4	Mast height		Free lift H2
	H3 min	H5 max	
	DCG100-180		
118	126	185	–
128	131	195	–
138	136	205	–
148	141	214	–
157	145	224	–
167	150	234	–
177	155	244	–
187	160	254	–
197	165	264	–
217	175	283	–
236	185	303	–
256	195	323	–
276	205	342	–



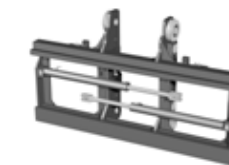
Duplex standard, free visibility



Fixed for manually moveable forks



Center levelling



Fork positioning and sideshift



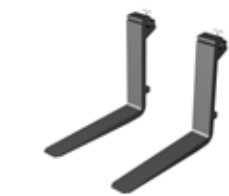
Sideshift

DUPLIX FULL FREE LIFT, CLEAR VIEW

Lift height H4	Mast height		Free lift H2
	H3 min	H5 max	
	DCG100-180		
118	126	185	59
128	131	195	64
138	136	205	69
148	141	214	74
157	145	224	79
167	150	234	84
177	155	244	89
187	160	254	94
197	165	264	98
217	175	283	108
236	185	303	118
256	195	323	128
276	205	342	138



Duplex full free lift, free visibility



Forks for manual adjustment



Quick change system with separate carriers for each fork

TRIPLEX FE_L, CV

Lift height H4	Mast height		Free lift H2
	H3 min	H5 max	
	DCG100-180		
177	123	244	59
197	130	263	66
217	136	283	72
236	143	303	79
256	149	322	85
276	156	342	92



Triplex full free lift, free visibility



Roller fittings for hydraulic adjustment



Hydraulic leveling

STANDARD

Chassis/Body

- Towing pin
- Steps with anti slip protection
- Strong and protective fenders
- Anti-slip strips on front fenders and tanks

Cabin

- EGO Cabin
- Tinted front laminated safety glasses
- Clear and tempered panes of safety glass, thickness 1/4"
- Clear windows with sliding windows in left and right door
- Wiper and washers front/rear and roof window
- Complete doors with locks left and right side
- Door opening holder left side
- Kalmar standard key system
- Instep handle, left side
- Internal comfort with mirror, handles, interior lighting etc.
- Automatic heat and ventilation (ECH) with fresh air inlet filter
- Full suspension seat with 2-point orange belt
- Complete maneuver system right hand console with light controls, navigation wheel for display, levers for load handling system (electric adjustable, 2-ways)
- Hydraulic steering system with electrically height adjustable steering wheel with knob, manually adjustable laterally and longitudinally
- Multi-function lever left side includes horn, turn signal
- Brake system with pedal left and right side
- Speed control pedal right side
- Color display:
 - Fuel level, indicator
 - Engine, transmission temperature
 - Oil pressure engine
 - Battery voltage
 - Clock and date
 - Hour meter
 - Service time indicator
 - Speed (mph or kmh)
 - Engine speed (RPM)
 - Various information via pop-up
 - Diesel Exhaust Fluid (DEF) indicator
- Cup holder
- Electric strong tone horn
- External reverse lights
- Tilting cab

Steering system

- Steering axle Kalmar, including double acting steering cylinder

Mast & Carriage

- Lifting eyes in mast
- Tapered roller bearings including 6x6 lift chain (duplex standard mast only)

Drivetrain

- Driveaxle DCG100-180; Kessler with wet disc brakes
- Temperature controlled cooling fan
- Automatic gearshift with declutch at brake (Manual gearshift possible in control panel)

Hydraulics

- Electrical servo
- 2 load handling functions, lift and tilt
- Level sight glass on hydraulic oil tank
- Load sensing pumps
- High pressure filter
- Automatic raised engine rpm when load handling function is used
- Mast tilt angles - 10° backward / 14° forward
- Leakage-free ORFS couplings

Electric system

- Electrical system 24 V
- Rear lights and brake lights, LED
- Working lights on front fender, LED
- Working light mast, 2 pcs, LED
- Indicator lamps with hazard lights, LED
- Flashing brake lights when reversing
- Main power switch
- Rotating beacon adjustable LED
- Reverse alarm

Wheels

- Pneumatic DCG100-160 12.00x20
- DCG180-6 12.00x20 (high cap. tires)

Color

- Cab: frame RAL 7011/70, covers RAL 7021/10
- Chassis: Kalmar Red 2012 (Base ref. RAL 3000/75)
- Lifting equipment: Kalmar Black (Base ref. RAL 7021/30)

Documentation & decals

- Operators manual
- Maintenance manual
- Parts catalog
- Load diagram in cab.
- Warning decals
- Information decals
- Diagram, fuses
- Capacity plate and 'No Riders' warning sign.





KALMAR

Making your every move count

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