



Kalmar Medium Forklifts DCG90-180

9 – 18 tonne capacity



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

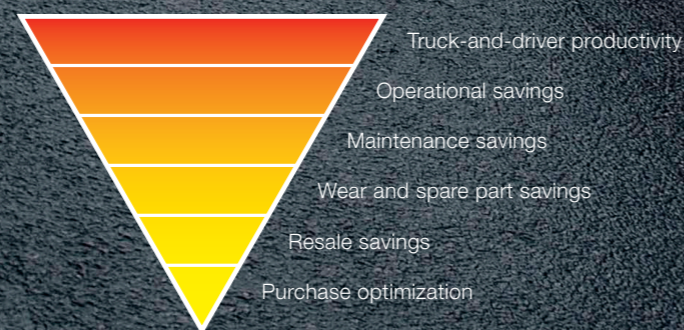
Like all Kalmar solutions, Kalmar DCG90-180 lift trucks offer greater total lifetime savings by improving the performance of your truck-and-driver teams. DCG90-180 is a range of Kalmar trucks with a lifting capacity of 9-18 tonnes. Each in the range is designed, built and delivered to keep truck uptime 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 DCG90-180 is designed, built and delivered to offer greater total lifetime savings – capitalising on insights from Kalmar'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.

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.



Our most productive driving environment

EGO cabin enables driver productivity

The DCG90-180 offers your drivers Kalmar's most productive driving environment – our EGO cabin. EGO provides a great working environment, ergonomic excellence and 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 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 flexible and safe pedal system gives an adjustable pedal angle. The improved ergonomics minimises 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 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.

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.

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.

The joystick with built-in gear knob is designed to improve driving efficiency. It is optimised for maximum lifting capacity and ergonomically enhanced to reduce arm fatigue.

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

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.

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



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 EU Stage IV/Tier 4 Final emissions compliant diesel engines for regulated markets*. From Volvo and Cummins, both cut particulate emissions by 90% as well as reduce nitrogen oxide emissions.

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.

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.

Keeping clean and cool to reduce risks of failure

A cooling system improves uptime and operational reliability of the DCG90-180. 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.

* For non-regulated markets we can offer EU stage III.



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

Compared to our previous model, the DCG90-180 uses up to 15 per cent 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 DCG90-180 with an optional drive axle and converter. The drive axle and converter is optimized to match the engines performance and use the engine to its fullest. A lower rpm and an optimised gear ratio lowers the fuel consumption by up to 20% and make the machine quieter to operate without losing any performance.

ECO drive modes

Choose between three different drive modes, each optimised 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.

* Compared to Kalmar DCE90-180 with Stage IIIB engine.



Power

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

Normal

Balances power and economy to optimise 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 DCG90-180 with a number of different engine options for regulated and non-regulated markets. Engines from both Volvo and Cummins are available in different ratings.

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 per cent 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 DCG90-180. 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.

ECO drive axle

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

Turnable driver seat 180°

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

Ergonomic steering, precise maneuvering. Saves the driver's shoulders during long shifts.



Improving safety and operating costs

Like all Kalmar equipment, 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 DCG90-180 helps reduce the risk of accidents. It not only meets all current and emerging demands for operator health and safety. It can also be equipped with a number of safety features making the operations as safe as possible.

Speed limitations

Kalmar can configure your forklift depending on your needs. Limitations can be set both in relation to lifting height and travel speed or in combination. In order to increase the safety in your operations.

Alco lock

More and more companies are installing Alco lock on their machine. This is an efficient way of prohibiting persons intoxicated by alcohol to operate the forklift.

Fire suppression system

In the unlikely event of a fire in the engine compartment the suppression system will automatically be activated to suppress the fire. A useful option in e.g. sawmill.



Blue safety light
The blue safety light alerts people that the truck is approaching, reducing the risk of accidents.



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





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).

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 jeopardises 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 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 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 9-18 tonne 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.

Drive train and performance

	Volvo TAD871 VE ZF 3WG171 (185 kW)		Volvo TAD572 VE ZF 3WG171 (160 kW)	
	Volvo TAD871VE (Turbo-Intercooler)	Volvo TAD572VE (Turbo-Intercooler)	Volvo TAD871VE (Turbo-Intercooler)	Volvo TAD572VE (Turbo-Intercooler)
ENGINE				
Manufacturer's type designation	Volvo TAD871VE (Turbo-Intercooler)		Volvo TAD572VE (Turbo-Intercooler)	
Fuel, type of engine	Diesel, 4-stroke		Diesel, 4-stroke	
Rating ISO 3046 / at revs	185/252 / 2200		160/218 / 2300	
Peak torque ISO 3046 / at revs	1160 / 1200		910 / 1200	
Number of cylinders / displacement	6 / 7700		4 / 5100	
Fuel consumption, normal driving	8-10		7-9	
AdBlue consumption, normal driving	3-5		3-5	
Emission standard	Stage IV / Tier 4 final		Stage IV / Tier 4 final	
GEARBOX & MISC				
Manufacturer's type designation	ZF 3WG171		ZF 3WG171	
Clutch, type	Torque converter		Torque converter	
Gearbox, type	Hydrodynamic Powershift		Hydrodynamic Powershift	
Numbers of gears, forward / reverse	3 / 3		3 / 3	
Alternator, type / power	AC / 3640		AC / 3080	
Starting battery, voltage / capacity	2x12 / 150		2x12 / 150	
Driving axle, manufacturer / type	Kessler D81 / Differential and hub reduction		Kessler D81 / Differential and hub reduction	

		DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG
		90-6	100-6	120-6	127-6	140-6	150-6	100-12	120-12	150-12	160-6	160-9	160-12	180-6
Lifting speed	Unloaded (m/s)	-	-	-	-	-	-	0,40	0,40	0,40	0,40	0,40	-	
	At rated load (m/s)	-	-	-	-	-	-	0,35	0,35	0,35	0,35	0,35	-	
Lowering speed	Unloaded (m/s)	-	-	-	-	-	-	0,30	0,30	0,30	0,30	0,30	-	
	At rated load (m/s)	-	-	-	-	-	-	0,40	0,40	0,40	0,40	0,40	-	
Travelling speed, F/R	Unloaded (km/h)	-	-	-	-	-	-	30	30	30	30	30	-	
	At rated load (km/h)	-	-	-	-	-	-	29	29	29	29	29	-	
Gradeability, max.	Unloaded (%)	-	-	-	-	-	-	105	83	111	91	82	-	
	At rated load (%)	-	-	-	-	-	-	50	41	44	41	40	-	
Gradeability, at 2 km/h	Unloaded (%)	-	-	-	-	-	-	84	69	88	75	69	-	
	At rated load (%)	-	-	-	-	-	-	43	36	38	36	35	-	
Drawbar pull	Max. (kN)	-	-	-	-	-	-	140	140	140	140	140	-	
Noise level, inside	LpAZ*, EGO cabin (dB(A))	-	-	-	-	-	-	71	71	71	71	71	-	
	LpAZ*, EGO cabin OHG (dB(A))	-	-	-	-	-	-	83	83	83	83	83	-	
Noise level, outside	LWA** (dB(A))	-	-	-	-	-	-	107	107	107	107	107	-	

* LpAZ according to EN12053 ** LWA according to 2000/14/EC

		DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG
		90-6	100-6	120-6	127-6	140-6	150-6	100-12	120-12	150-12	160-6	160-9	160-12	180-6
Lifting speed	Unloaded (m/s)	0,50	0,50	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	
	At rated load (m/s)	0,45	0,45	0,35	0,35	0,35	0,35	0,35	0,35	0,35	0,35	0,35	0,35	
Lowering speed	Unloaded (m/s)	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	
	At rated load (m/s)	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	
Travelling speed, F/R	Unloaded (km/h)	29	29	29	29	29	29	29	29	29	29	29	29	
	At rated load (km/h)	28	28	27	28	28	28	28	28	27	27	27	27	
Gradeability, max.	Unloaded (%)	>120	>120	>120	114	111	82	91	83	68	86	73	68	
	At rated load (%)	63	59	52	47	44	39	49	43	36	38	36	33	
Gradeability, at 2 km/h	Unloaded (%)	103	98	91	82	81	63	69	64	54	66	58	56	
	At rated load (%)	50	47	42	39	37	32	40	35	30	32	30	29	
Drawbar pull	Max. (kN)	127	127	127	123	123	123	123	123	123	123	123	123	
Noise level, inside	LpAZ*, EGO cabin (dB(A))	71	71	71	71	71	71	71	71	71	71	71	71	
	LpAZ*, EGO cabin OHG (dB(A))	83	83	83	83	83	83	83	83	83	83	83	83	
Noise level, outside	LWA** (dB(A))	109	109	109	109	109	109	109	109	109	109	109	109	

* LpAZ according to EN12053 ** LWA according to 2000/14/EC

	Cummins QSB6,7 ZF 3WG171 (168 kW)		Cummins QSB6,7 ZF 3WG161 (129 kW)	
	Cummins QSB6,7 (Turbo-Intercooler)	Cummins QSB6,7 (Turbo-Intercooler)	Cummins QSB6,7 (Turbo-Intercooler)	Cummins QSB6,7 (Turbo-Intercooler)
ENGINE				
Manufacturer's type designation	Cummins QSB6,7 (Turbo-Intercooler)		Cummins QSB6,7 (Turbo-Intercooler)	
Fuel, type of engine	Diesel, 4-stroke		Diesel, 4-stroke	
Rating ISO 3046 / at revs	168/228 / 2200		129/176 / 2200	
Peak torque ISO 3046 / at revs	949 / 1500		800 / 1400	
Number of cylinders / displacement	6 / 6702		6 / 6702	
Fuel consumption, normal driving	7-9		8-10	
AdBlue consumption, normal driving	3-5		3-5 / N/A	
Emission standard	Stage IV / Tier 4 final		Stage IV & IIIA	
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	AC / 1960		AC / 1680	
Starting battery, voltage / capacity	2x12 / 150		2x12 / 150	
Driving axle, manufacturer / type	Kessler D81 / Differential and hub reduction		Kessler D81 / Differential and hub reduction	

		DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG
		90-6	100-6	120-6	127-6	140-6	150-6	100-12	120-12	150-12	160-6	160-9	160-12	180-6
Lifting speed	Unloaded (m/s)	-	0,50	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	
	At rated load (m/s)	-	0,45	0,35	0,35	0,35	0,35	0,35	0,35	0,35	0,35	0,35	0,35	
Lowering speed	Unloaded (m/s)	-	0,30	0,30	0,30	0,30	0,30	0,30	0,30	0,30	0,30	0,30	0,30	
	At rated load (m/s)	-	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	
Travelling speed, F/R	Unloaded (km/h)	-	29	29	30	30	30	30	30	30	30	30	30	
	At rated load (km/h)	-	27	27	28	28	27	28	28	27	27	27	27	
Gradeability, max.	Unloaded (%)	-	>120	>120	118	115	84	94	85	70	89	75	69	
	At rated load (%)	-	60	53	48	45	39	50	44	36	39	36	35	
Gradeability, at 2 km/h	Unloaded (%)	-	88	82	75	73	58	64	59	50	61	53	50	
	At rated load (%)	-	44	39	36	34	30	37	33	28	30	28	27	
Drawbar pull	Max. (kN)	-	129	129	125	125	125	125	125	125	125	125	125	
Noise level, inside	LpAZ*, EGO cabin (dB(A))	-	73	71	71	71	71	71	71	71	71	71	71	
	LpAZ*, EGO cabin OHG (dB(A))	-	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	

* LpAZ according to EN12053 ** LWA according to 2000/14/EC

		DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG	DCG
		90-6	100-6	120-6	127-6	140-6	150-6	100-12	120-12	150-12	160-6	160-9	160-12	180-6
Lifting speed	Unloaded (m/s)	0,50	0,50	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	
	At rated load (m/s)	0,45	0,45	0,35	0,35	0,35	0,35	0,35	0,35	0,35	0,35	0,35	0,35	
Lowering speed	Unloaded (m/s)	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	
	At rated load (m/s)	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	
Travelling speed, F/R	Unloaded (km/h)	29	29	29	29	29	29	29	29	29	29	29	29	
	At rated load (km/h)	28	28	27	28	28	28	28	28	27	27	27	27	
Gradeability, max.	Unloaded (%)	>120	>120	>120	107	104	78	87	79	65	82	70	65	
	At rated load (%)	-	57	50	45	43	37	47	41	34	37	34	32	
Gradeability, at 2 km/h	Unloaded (%)	-	97	91	79	78	61	67	62	52	64	56	54	
	At rated load (%)	-	47	41	37	35	31	39	34	29	30	29	28	
Drawbar pull	Max. (kN)	109	109	109	104	104	104	104	104	104	104	104	104	
Noise level, inside	LpAZ*, EGO cabin (dB(A))	73	73	73	73	73	73	73	73	73	73	73	73	
	LpAZ*, EGO cabin OHG (dB(A))	85	85	85	85	85	85	85	85	85	85	85	85	
Noise level, outside	LWA** (dB(A))	108	108	108	108	108	108	108	108	108	108	108	108	

* LpAZ according to EN12053 ** LWA according to 2000/14/EC

Lifting equipment

Here is how the DCG90-180 helps drivers optimise lifting efficiency and save fuel – at the same time. To begin with, its new electric and hydraulic systems mean quicker response, high lifting speed and increased control. Meanwhile, new 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 optimise operations.

Kalmar offer you a complete range of standard and custom lifting equipment – carriage, fork shaft, forks, levelling, etc – and options to suit your specific lifting and cargo handling requirements.



DUPLEX STANDARD, CLEAR VIEW

Lift height H4	Mast height		Free lift H2	Mast height		Free lift H2
	H3 min	H5 max		H3 min	H5 max	
	DCG90-140*			DCG100-180**		
3000	3015	4515	-	3195	4695	-
3250	3140	4765	-	3320	4945	-
3500	3265	5015	-	3445	5195	-
3750	3390	5265	-	3570	5445	-
4000	3515	5515	-	3695	5695	-
4500	3765	6015	-	3945	6195	-
5000	4015	6515	-	4195	6695	-
5500	4265	7015	-	4445	7195	-
6000	4515	7515	-	4695	7695	-
6500	4765	8015	-	4945	8195	-
7000	5015	8515	-	5195	8695	-

DUPLEX FULL FREE LIFT, CLEAR VIEW

Lift height H4	Mast height		Free lift H2	Mast height		Free lift H2
	H3 min	H5 max		H3 min	H5 max	
	DCG90-140*			DCG100-180**		
3000	3015	4515	1500	3195	4695	1500
3250	3140	4765	1625	3320	4945	1625
3500	3265	5015	1750	3445	5195	1750
3750	3390	5265	1875	3570	5445	1875
4000	3515	5515	2000	3695	5695	2000
4500	3765	6015	2250	3945	6195	2250
5000	4015	6515	2500	4195	6695	2500
5500	4265	7015	2750	4445	7195	2750
6000	4515	7515	3000	4695	7695	3000
6500	4765	8015	3250	4945	8195	3250
7000	5015	8515	3500	5195	8695	3500

TRIPLEX FFL, CW

Lift height H4	Mast height		Free lift H2	Mast height		Free lift H2
	H3 min	H5 max		H3 min	H5 max	
	DCG90-140*			DCG100-180**		
4500	2950	5950	1500	3130	6190	1500
5000	3117	6450	1667	3297	6690	1667
5500	3283	6950	1833	3463	7190	1833
6000	3450	7450	2000	3630	7690	2000
6500	3617	7950	2167	3797	8190	2167
7000	3783	8450	2333	3963	8690	2333

+25 mm on H3 and H5 on the DCG140
 * DCG90-140-6
 ** DCG150-180-6, DCG160-9, DCG100-160-12



Duplex standard, free visibility



Duplex full free lift, free visibility



Triplex full free lift, free visibility



Fixed for manually moveable forks



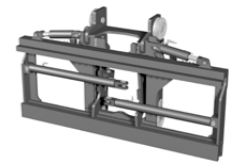
Fork positioning and sideshift



Forks for manual adjustment



Roller fittings for hydraulic adjustment



Centre levelling



Sideshift



Fork shaft system with separate carriers for each fork



Hydraulic levelling



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

Kalmar is part of Cargotec. Cargotec's sales totalled approximately EUR 3.2 billion in 2013 and it employs approximately 11,000 people. Cargotec's class B shares are quoted on NASDAQ OMX Helsinki under symbol CGCBV. www.cargotec.com

Cargotec Sweden AB
Torggatan 3
SE-340 10, Lidhult, Sweden
tel. +46 372 260 10
fax +46 372 263 90