

The business machine



Kalmar DCG50-90
5-9 ton capacity



We mean business

The DCG50-90 industrial diesel forklift from Kalmar is a profitable investment. This lightweight machine helps you produce more in less time. And that translates into larger revenues and higher productivity.

But isn't every forklift a profitable investment, regardless of its brand? Isn't a forklift a forklift? Not really, not if you want a machine that will make a noticeable improvement on your business.

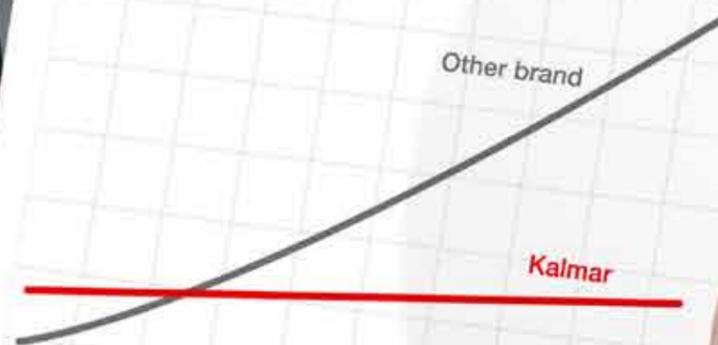
Consider your forklift an integral part of your production system, every bit as important as your other machinery. Then you'll conclude you need a machine renowned for its robustness and ability to deliver value.

Kalmar has one big advantage when it comes to manufacturing lightweight industrial forklifts. Unlike most of our competitors, we also have a strong tradition with high-capacity forklifts.

We have put our experiences from these demanding applications into the design of the DCG50-90. There is no better uptime guarantee.

Your forklifts are vital pieces of equipment for your company. So why even consider choosing anything but the best?

Life-cycle cost (LCC)



It's not about purchase price. It's about life cycle cost. Your Kalmar DCG50-90 forklift will reduce your operational costs and service costs. It pays off in the long run.

The bottom line

You should be able to push your forklift hard, shift after shift, without experiencing any technical problems. It's as simple as that, at least in theory. In practice, only Kalmar delivers.

Ruggedness alone is not sufficient though. You also need high operational performance and useful features to work efficiently in the plant. The DCG50-90 delivers the technological excellence required to meet the demands of even the most skilled operators.

Perhaps you may still ask yourself: "How important can it be to choose the very best forklift? Isn't good enough, enough? After all, forklift operation is not our core business?"

Productivity and savings

We say, your forklifts are absolutely business critical. Or, at least they should be. If you produce or handle heavy industrial products, you need to ensure your forklifts run smoothly, around the clock. It will show favorably on your bottom line.

A Kalmar forklift delivers, on average, 10 percent higher productivity than our previous model DCF50-90. The difference between finishing eleven

instead of ten lifts in the same time may seem small. But looking over the year – or over the forklift's lifetime – it translates into a lot of money. Just like the 15 percent less fuel consumption, which you will enjoy by operating the forklift in Kalmar's proprietary Eco mode.

Smoother service and higher resale value

Fewer unplanned stoppages, faster maintenance and repairs and longer service intervals combine to increase the forklift's total productive time, while lowering life-cycle costs.

In fact, your DCG50-90 will continue to save you money even after it's through serving you. Like a premium car brand, your Kalmar will have the highest resale value in the forklift market.

Savings potential with the DCG50-90

This example shows how a sawmill (or similar production facility) can save money using Kalmar DCG50-90.

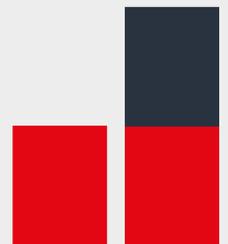
 15%

Using the economy engine mode, Eco, reduces fuel consumption by up to 15 percent.

Productivity improvement

+10%

Optimizing the drive train, hydraulic system and electric system together improves productivity by 10 percent compared to the previous generation of Kalmar lightweight forklifts.



Tailored for your production

Your production system consists of many customized machines and systems. Conveyors, hoists, robots – and forklifts – must all be perfectly adapted to your demands. Because every production line is unique.



Four at a time. Kalmar's paper-clamp attachment makes it possible to speed up the handling of paper rolls at Gävle harbor in Sweden.

G-Generation tailoring

Like any other part of your production system, your forklifts need to be customized to your operations. And there are many aspects to consider in order for them to perform optimally. Kalmar is globally renowned for its highly tailored forklifts. The DCG50-90 is no exception. Like its fellow Kalmar G generation machines, it comes with many customizable features.

Industry-specific adaptations

Given our forklifts' excellent adjustability, it's no surprise our customers are found in such diverse industries as paper and pulp, wood, steel, concrete, offshore – just to name a few.

Wide range of attachments

The forklift can be equipped with any lifting equipment your business may require including pipe clamps, multiple-pallet handlers, coilrams or special tools.

Three different performance settings

The driver can optimize the forklift's operational performance depending on the actual need for e.g. low fuel consumption or high power output. All from the comfort of the popular EGO cabin – and by simply toggling a switch during operation.

Tailored operator environment

Customizing your forklift is not just about ordering factory-delivered features. It's also about being able to adapt the driver's operational environment using, for example, adjustable seat, levers and settings. Need we say that no other forklift brand is as adaptable to different driver requirements?

Can we cater for your needs too?

Many of our tailored customer solutions have later been taken up as standard options in our attachment range. After all, you – our customers – know your business best, and we'd be happy to discuss the most suitable attachment solution for your special needs.

"Kalmar's light forklift range has a strong reputation among customers worldwide. It owes much of its acclaim to its adaptability – one of many reasons 87 percent say they'd re-purchase."



Eco mode

Optimizes the forklift for the lowest fuel consumption.

50/50

Normal mode

Balances performance and speed.



Power mode

Optimizes the forklift for maximum speed and performance.

Keeping operators in good shape

Most companies agree that safety and ergonomics are important. But is it really worth the expense to go for the *very best* operator environment? We say: can you afford *not* to care for your operators' well-being?

Even the most advanced forklift is only half a forklift without a healthy and motivated driver. Invest in your operators' wellbeing and you can expect them to perform better, stay healthy and remain loyal to your company. Who wouldn't want that?

Your operators' performance depends directly on their health and safety. Not only as reduced sick leave, but above all as improved productivity. The many ergonomic and safety features implemented in Kalmar's EGO cabin – which comes as standard with the DCG50-90 – allow operators to perform at their best.

Clear view

Stepping into the cabin, you will immediately notice the exceptionally good view diagonally, forward and backward. Curved, and with no side-posts, the large front-view window provides perfect, unobstructed view of the work area. No more constantly changing positions to get a clear view from the cabin.

Electronic control

Levers and controls are made with operator ergonomics and performance in mind. Every feature is electronically operated and adjusted. Take our mini-steering wheel, for example. Maneuvering the forklift with only one finger helps to offload the operator's arms, neck and shoulders. An electric joystick allows for precise control of your attachments, while making lifting easier.

With thousands of lifts every year, features like these ensure good operator health in the long run.

There is also a reverse camera that gives the operator a clear back view. In fact, by choosing our optional rotatable operator seat, you can swing the seat around 180 degrees to be able to always drive in the forward direction.

Along with complete climate control, the many ergonomic features make the EGO cabin a safe and luxurious working environment that can be customized to each driver's needs.



Turnable seat and mini-steering wheel

In tough applications, the operator makes more than 150,000 lifts every year. Just imagine the offloading of neck and shoulders when being able to always drive in the forward direction, or steering the forklift with only your index finger.

Why ergonomics matter

Your forklift lifts more than you think. Here is an estimate of the typical yearly number of lifts in tough 24/7 industrial operations.

Lifts per hour: 25
Lifts per day: 25 x 20 hours = 500 lifts
Lifts per year: 500 x 300 days = 150,000 lifts

Fault diagnosis with pinpoint accuracy

Every machine needs service at regular intervals, and it takes this or that much time to get it fixed. And you simply have to expect unplanned stoppages and try your best to estimate the maintenance costs. Right? Not necessarily.

What if you could avoid costly standstills altogether? Or prolong your service intervals and have the first service after 500 hours? It's possible with the DCG50-90 and any other G-generation machine from Kalmar.

Early alert

The forklift's electric system contains advanced computer technology. Its features include precise diagnostics that informs the operator if there is a problem with the machine.

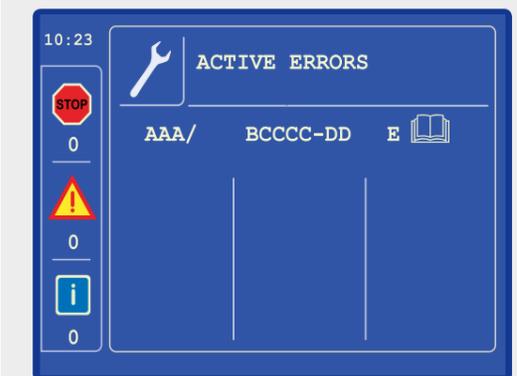
This heads-up alerting system allows the operator to immediately call in service personnel and thus eliminate the problem before it is allowed to cause stoppage and costly downtime.

Fast troubleshooting

What used to take hours of troubleshooting is now instantly presented as an error code in a display. This is made possible by continuously registering operational data in the forklift's control system.

Many times, operators can solve a problem themselves, before it escalates into failure. Repairs are speeded up since the service technician will know about the problem in advance, and can bring the appropriate replacement parts to your site.

If your business machine is even more mission critical than for most companies, Kalmar are also proud to offer an extensive range of leasing and service contracts.



A fault is presented as an error code consisting of device number (marked AAA in the above chart), component number (BCCCC-DD) and type of error (E).



Kalmar Care – Making sure your business never stops

We offer four types of service and maintenance contracts. Each has a set of standardized modules to meet your business's needs. Which level is most suitable for your needs?

Kalmar Support Care

We support your maintenance processes on demand.

- Availability of skilled people with the right tools and parts.
- Added skills to your maintenance organization.

Kalmar Complete Care

We meet your complete maintenance requirements.

- Improved predictive maintenance.
- Lower operational risk for customers.
- Reduced equipment downtime.
- Reduced total cost of operation.
- Increased operational predictability.

Kalmar Essential Care

We perform agreed maintenance tasks proactively.

- Availability of skilled people with the right tools and parts.
- Improved financial predictability.
- Reduced operational risk for customers.
- Improved availability of machines.

Kalmar Optimal Care

We optimize your business performance.

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

The big picture

Say your new premium-class Kalmar DCG50-90 forklifts are now up and running at your plant. Performing superbly, perfectly customized. But how efficiently are they working together?

Just because each individual forklift performs optimally, doesn't mean they are optimized at plant level. If not, your forklift fleet won't perform as expected after all.

Revealing productivity thieves

Perhaps one of your forklifts consistently lifts slightly heavier loads than it was designed to do. Maybe there's a bottleneck in the forklifts' driving patterns? These, and many other, potential productivity thieves will be revealed in detail when you implement Smart Fleet to monitor your forklift operation.

With this monitoring system from Kalmar, you will see the big picture. And that will allow you to make the necessary changes to maximize not only the value of your forklift investment, but of your production system as a whole.

Smart Fleet keeps track of many parameters that may or may not affect your forklifts' productivity. For how long are your machines idle in a day? How many times have they been in shock or overload situations? What routes are they taking to do their tasks?

Improving workplace safety

Smart Fleet data can also help you improve workplace safety. Driving patterns will reveal any dangerous areas where there may be people working or several forklifts passing regularly.

Data is available as real-time information or as statistics, and can be presented as easily interpreted reports. This will prove a powerful tool in helping you analyze how your forklifts are actually used – and what to do to improve your plant's overall efficiency.

Smart Fleet helps you optimize the efficiency of your forklift fleet by registering operational data from each individual machine.

Fuel consumption: 3.92 lit/h
Fuel per load: 0.3 lit/load
Fuel per ton: 0.19 lit/ton
Loads per hour: 12.6 loads/h

Operating time: 7.3 h
Idle time: 2.1 h
Fuel used: 25.6 lit
Distance: 19.1 km

Lifts at 90–100% of capacity: 11
Number of overloads: 12
Number of shocks: 5

Some of the functions in Kalmar's Smart Fleet system:

- Real-time data
- Statistics
- Map functions
- Event analyses
- Alarms
- Fuel efficiency
- Report functions
- Service counter

Lifting equipment

We offer a full range of duplex, triplex and free-lift equipment. Based on our long tradition as a supplier of heavy forklifts, our lifting equipment is robust and of the highest quality.

	Lift height H4		Mast height H3 min		Mast height H5 max		Free lift H2	
	•	••	•	••	•	••	•	••
DUPLEX STD	-	2750	-	2560	-	3910	-	-
	-	3000	-	2685	-	4160	-	-
	-	3250	-	2810	-	4410	-	-
	3500	3500	2625	2935	4500	4660	-	-
	3750	3750	2750	3060	4750	4910	-	-
	4000	4000	2870	3185	5000	5160	-	-
	4250	4250	3000	3310	5250	5410	-	-
	4500	4500	3120	3435	5500	5660	-	-
	4750	4750	3250	3560	5750	5910	-	-
	5000	5000	3370	3685	6000	6160	-	-
	5250	5250	3500	3810	6250	6410	-	-
	5500	5500	3620	3935	6500	6660	-	-
	5750	5750	3750	4060	6750	6910	-	-
6000	6000	3870	4185	7000	7160	-	-	
DUPLEX FREE LIFT	-	2750	-	2560	-	3910	-	1425
	-	3000	-	2685	-	4160	-	1550
	3250	3250	2620	2810	4350	4410	1530	1675
	3500	3500	2750	2935	4600	4660	1655	1800
	3750	3750	2870	3060	4850	4910	1780	1925
	4000	4000	3000	3185	5100	5160	1905	2025
	4250	4250	3120	3310	5350	5410	2030	2175
	4500	4500	3250	3435	5600	5660	2155	2300
	4750	4750	3370	3560	5850	5910	2280	2425
	5000	5000	3500	3685	6100	6160	2405	2550
	5250	5250	3620	3810	6350	6410	2530	2675
	5500	5500	3750	3935	6600	6660	2655	2800
	5750	5750	3870	4060	6850	6910	2780	2925
6000	6000	4000	4185	7100	7160	2905	3050	
TRIPLEX	4950	4200	2570	2580	6010	5330	1530	1470
	5450	4700	2740	2750	6515	5825	1690	1640
	5950	5200	2910	2920	7015	6330	1860	1800
	6450	5700	3070	3080	7510	6825	2030	1970
		6200		3250		7330		2140

• DCG50-55H, DCG60-70, DCG60-70H
 •• DCG80-90, DCG80-90H



Duplex Standard



Duplex Freelift



Triplex

Drive train and performance

ENGINE	Manufacturer's type designation	AGCO 44 AWF 77kW, with ZF 2WG 94	AGCO 44 AWF 85kW, with ZF 2WG 94	AGCO 44 AWF 77kW, with hydrostatic drive
	Fuel, type of engine	Diesel - 4 - stroke	Diesel - 4 - stroke	Diesel - 4 - stroke
	Rating ISO 3046 / at revs	77 / 2200	85 / 2200	77 / 2200
	Peak torque ISO 3046 / at revs	425 / 1500	450 / 1500	425 / 1500
	Number of cylinders / displacement	4 / 4400	4 / 4400	4 / 4400
Fuel consumption, normal driving	5-7	6-8	5-7	
AdBlue consumption, normal driving	3-4	3-4	3-4	
Emission standard	Stage 4	Stage 4	Stage 4	
GEARBOX & MISC	Manufacturer's type designation	ZF 2WG 94	ZF 2WG 94	Bosch Rexroth MCR10
	Clutch, type	Torque converter	Torque converter	Radial piston motor
	Gearbox, type	Hydrodynamic Powershift	Hydrodynamic Powershift	Hydrostatic
	Numbers of gears, forward / reverse	2 - 2	2 - 2	-
	Alternator, type / power	2400	2400	2400
	Starting battery, voltage / capacity	24 - 75	24 - 75	24 - 75
	Driving axle, manufacturer / type	Kessler D41 Differential and hub reduction	Kessler D41 Differential and hub reduction	N/A

PERFORMANCE, AGCO	Lifting speed	Unloaded (m/s)	DCG50-6	DCG55-6	DCG60-6	DCG70-6	DCG80-6	DCG80-9	DCG90-6	
		At rated load (m/s)	0,37	0,37	0,37	0,37	0,37	0,37	0,37	0,37
	Lowering speed	Unloaded (m/s)	0,42	0,42	0,42	0,42	0,42	0,42	0,42	0,42
		At rated load (m/s)	0,49	0,49	0,49	0,49	0,49	0,49	0,49	0,49
	Travelling speed, F/R	Unloaded (km/h)	22	22	23	23	23	23	23	23
		At rated load (km/h)	21	21	22	22	22	22	22	22
	Gradeability, max.	Unloaded (%)	31	29	85	75	63	50	59	59
		At rated load (%)	20	19	43	38	33	30	30	30
	Gradeability, at 2 km/h	Unloaded (%)	30	28	70	62	54	43	50	50
		At rated load (%)	13	12	30	26	23	20	21	21
Drawbar pull	Max. (kN)	26	26	59	59	59	59	59	59	
	LpAZ*, EGO cabin (dB(A))	75	75	72,5	72,5	72,5	72,5	72,5	72,5	
Noise level, inside	LpAZ*, EGO cabin OHG (dB(A))	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	LWA** (dB(A))	103	103	104	104	104	104	104	104	

* Noise level according to EN12053 ** Noise level according to 2000/14/EC



Forks for manual adjustment



Roller fittings for hydraulic adjustments



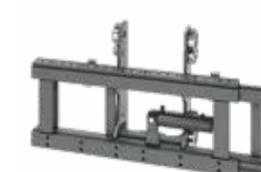
For shaft system



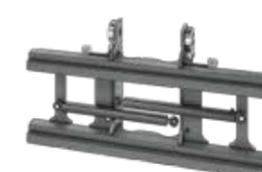
Hydraulic levelling



Fixed for manually moveable forks



Sideshift



Fork positioning and sideshift



Center levelling

Standard

Kalmar DCG50-90

Chassis/Body

- Towing pin
- Steps with anti-slip protection
- Strong and protective mudguards

Cabin

- Clear and tempered panes of safety glass, thickness 6 mm
- Std seat incl. 2-point belt with (orange).
- Clear windows incl. sliding windows in left and right door.
- Complete doors with locks left and right side.
- Complete manoeuvre system right hand console incl. light controls, toggle wheel for display, levers for load handling system (electric adjustable, 2-way's.)
- Multi function lever left side incl. horn, turn signal.
- Brake system with pedal left and right side.
- Internal comfort incl. mirror, handles, interior lighting etc.
- Wiper and washers front/rear and roof window.
- Hydraulic steering system incl. electrically adjustable steering wheel in height-, manually adjustable laterally and longitudinally with steering wheel knob.
- External reverse lights.
- Cab tilting
- Instep handle, left side
- Automatic heat and ventilation (ECH) with fresh air inlet filter.
- Speed control pedal right side.
- Kalmar std Key system.
- Cup holder
- Coat hook

Colour display & automatic fault analysis

- Menu control with toggle wheel & push buttons

Operator menu

- System voltage
- Actual gear
- Engine rpm
- Travelling speed (km/h or m/h)
- Hydraulic oil temperature
- Transmission oil temperature
- Engine oil pressure
- Engine coolant temperature
- Clock and date
- Operating time (hours)
- Service time indicator (hours)
- Status of heating system & AC system
- Fuel level (diesel and optional AdBlue)
- Est. operating time before empty tank (hour/min)

Various warning lights & signals

- Charging battery
- Low brake pressure
- Failure indicator
- High engine coolant temperature
- Low engine coolant level (not on Cummins)
- Low engine oil pressure
- Preheating engine
- Transmission oil temperature
- Low fuel level (incl AdBlue)
- Hydraulic oil temperature
- Low washer fluid level

Indicator lamps

- Head beam
- Direction indication
- Parking brake

Steering system

- Steering axel Kalmar, including double acting steering cylinder.

Drivetrain

- Driveaxle: Kessler D41 with wet disc brakes
- Engine: AGCO 44AWF Stage 4 77 and 85 kW
Engine monitoring and protection system
- Gearbox: ZF 2WG94
Declutch function activated by the brake pressure

Hydraulics

- Electrical servo
- Level sight glass on hydraulic oil tank
- Gear pumps
- High pressure filter
- Automatic raised engine rpm when load handling function is used
- Tilt angels std 5F/10B

Electric system

- Electrical system 24 V,
- Rear lights and brake lights, LED.
- Working light mast 2 pcs.
- Indicator lamps incl. hazard lights, LED.
- Main power switch

Wheels

- Pneumatic
DCG50-55 (Dimensions front- rear (inch) ;
315/70- 15 – 28x9-15
DCG60-90 (Dimensions front- rear (inch); 8,25x15
– 8,25 x 15

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 catalouge
- Load diagram in cab
- Warning decals
- Information decals
- Diagram, fuses
- Noise plate (legal requirement in EU/EEC)





www.kalmarglobal.com