

The power of choice.

with Kalmar Electric
20-40,000 lbs Forklift trucks.



Kalmar Electric Forklifts with
Lithium-ion or Lead Acid.



Giving you all the power you need.

The power of experience.

With over 100,000 machines built since the 1940's, our range of electric eco-efficient forklifts will deliver on your expectations, without compromise. They are built on our proven G-Generation platform with an electric driveline and rigorously tested electric and hydraulic systems. They perform as well as diesel models, both indoors and out.



The power of choice.

The Kalmar Electric Forklift range is available with lifting capacities from 20,000 to 40,000 lbs, three different lifting masts and a range of battery solutions to suit the lifting capacity, work cycle and size of the machine. Kalmar Lifetime Services offers a comprehensive range of service, maintenance and spare parts packages, so you can keep your new forklift working at its operational best.

The power of safety.

Kalmar's electric forklifts all offer highly responsive handling and superior visibility from the cabin, helping to keep your driver safe and in complete control at all times. There are a range of options available, including Blue Safety Lights, Reverse Warning System, ECO-drive mode, Adjustment of

Brake Power, Speed Adjustment and additional lighting to help keep your operator and by-standers secure.

The power of eco-efficiency.

Our range of zero-emission electric forklifts are ISO50001 compliant, which means they meet the highest emissions standards. They are extremely quiet and vibrate much less than a standard diesel-powered forklift, making them not only great to operate, but also invaluable for your reputation and environmental credentials.



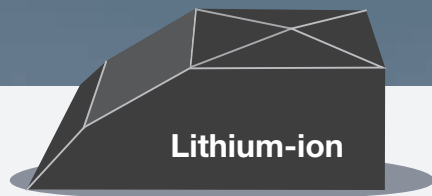
Ready for heavy loads.

With our electric forklifts being able to lift up to 40,000 lbs they can handle the heavy loads, making them ideal for industrial applications. Coupled with a short wheelbase where space is limited, they are built to handle heavy loads indoors or out.

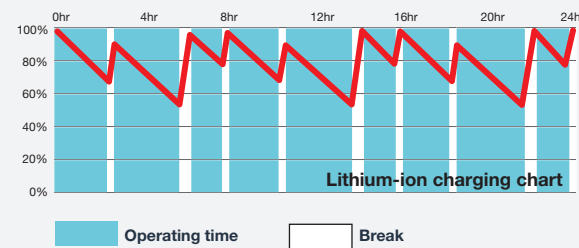
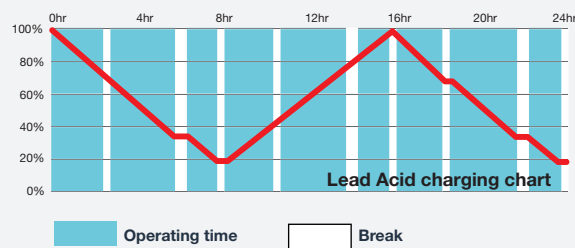
Lead Acid vs Li-ion.

Kalmar offers two types of battery technology to power its forklifts, Lead Acid and Lithium-ion. Here is a chart that demonstrates the difference between the two battery types so you can decide which is the right solution for your operations.

The Lead Acid battery is generally removed after a shift and then fully charged prior to being refitted onto the forklift, or it can be charged directly in a safe location. The Lithium-ion battery can be continuously recharged during operational downtime or breaks.



CHARGING PATTERN



FEATURES

- Lasts for up to **1,200 to 1,400** cycles
- Battery efficiency up to **70%**
- Generally removed to be fully charged
- Requires a ventilated charging space
- Requires regular maintenance/watering
- Additional batteries required for multi-shift operation.

- Lasts for up to **4,000** cycles
- Battery efficiency up to **95%**
- Is charged in place
- Does not require ventilated charging space
- Requires minimal maintenance
- Can be opportunity charged for multi-shift operation.

YOUR OPERATIONS

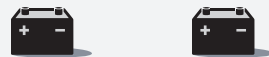
What is your operational cycle?

8 hrs

What is your operational cycle?

2-3hr 2-3hr 2-3hr 2-3hr 2-3hr

Are you operating more than one shift?



Are you operating more than one shift?



Charging time



8 hrs

Charging time



Fully charged in less than 2 hours

Good for business, great for the environment.

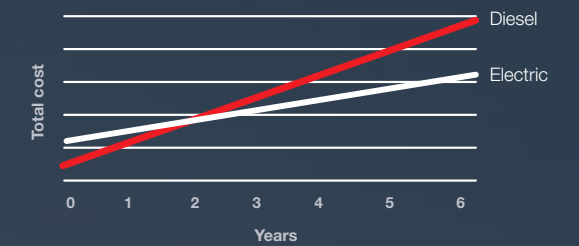
Reducing your emissions shouldn't come at a cost, it should be beneficial to both the environment and your bottom line.

Kalmar's eco-efficient forklifts deliver on both accounts. They are just as powerful and efficient as diesel models without producing any harmful emissions. In fact, they produce zero emissions at source, which will help you substantially cut your fuel bills, while improving your environment credentials.

It pays to go green.

With our electric forklifts, you will benefit from reduced fuel costs, spend up to 50% less on servicing - as electric machines have less moving parts - and longer service intervals, both helping to maximize machine availability. Even though electric forklifts cost a little more than diesel models, the payback period is as little as two years (depending on application). After this time, the savings really start to add up.

A two year payback period.



Using a Kalmar Electric Forklift truck pays off in the long run. In as little as 2 years time, Kalmar's Electric Forklift truck will break, even compared to the equivalent diesel truck.

Eco-efficiency at work.

Reducing the fuel consumption of your equipment also reduces your emissions, which will enhance your environmental reputation and help you meet current and future emissions standards. Together we can shape the future of cargo handling, with safe and eco-efficient solutions that improve your every move.



Electric

ECO-EFFICIENCY AT WORK

A healthier working environment.

Electric forklifts have always been seen as specialist machines for handling sensitive goods, in fact they deliver many additional benefits:



Less vibrations make handling sensitive goods safer and reduce stress and strain on your operator's body.



Electric forklifts are extremely quiet, making working indoors less disruptive for both operators and by-standers.



As electric forklifts produce no exhaust fumes they are suited to operate inside and where other staff are working or sensitive goods are stored.

A better driving experience.

All our electric forklifts feature our ergonomically designed EGO cabin fitted as standard. This cabin is built to provide a superior driving experience. With adjustable control, steering wheel and seat, your driver will be happier and more comfortable. The slim line cabin pillars provide an exceptional level of visibility, making the machine safer to operate, especially in busy environments.



Better control.

With all of our electric forklifts you will be able to have greater control over your machine with the speed pedal. Not only will you benefit from instant acceleration, you will also be able to slow down simply by taking your foot off the speed pedal.



Efficient and productive.

Buying an electric forklift doesn't mean compromising on power, as electric drivelines provide full torque immediately and are smoother to operate, making operating cycles shorter, driving up your operational productivity. With extended servicing cycles and improved diagnostic tools your machine will benefit from higher availability rates than the diesel alternatives.

A simpler design.

Electric forklifts have less moving parts than diesel models. Without the need to change the starter motor, turbo or fuel filters, servicing and maintenance on the machine will take less time and cost up to 50% less. As less parts are required, your parts replacement costs and stock levels will also be substantially reduced.

Reduce energy consumption by up to 20%.

Kalmar's ECO Drive mode option allows you to optimize your truck's performance with three different modes:

Power Mode: when speed is of the essence. With full engine power, you will be able to move quickly about, lift and lower at full speed, without compromising on safety.

Normal Mode: when you need to retain some speed. With a slightly reduced acceleration you can expect 5-15% lower running and energy costs.

Economy Mode: when you need the lowest running costs. With acceleration reduced even further you can expect 10-20% lower running and energy costs.



Kalmar Lifetime Services.



All the support you need.

Kalmar Care, making sure your business never stops.

We offer four different types of service and maintenance contracts. Each is designed to help you improve your operational efficiency, drive productivity and secure financial predictability. Each contract type includes a set of standardized service modules to meet your business needs.

Specialist support.

Kalmar can also offer specialist support for your new electric forklift as working with battery powered drivelines is different from diesel units. We can offer additional batteries if you are working more than one shift, pockets for your batteries so they can easily be removed with a forklift and recommend what sort of charging technology you should consider.

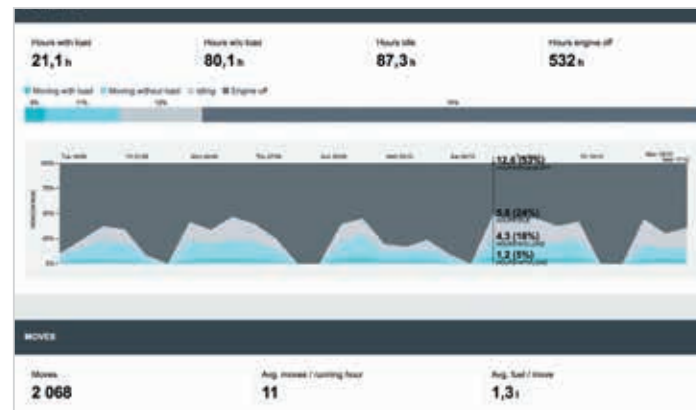
When the right part matters.

When something needs to be replaced you need a quality part that meets your exact needs – urgently. Kalmar Genuine Parts offers a rapid delivery service for over 50,000 premium-quality genuine parts to anywhere in the world, with installation support if needed.

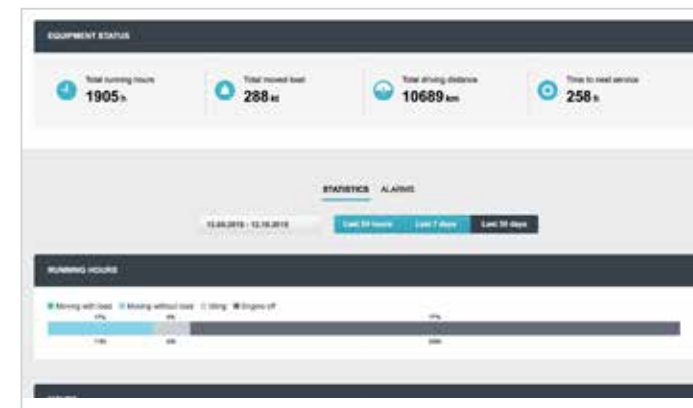
Optimize your fleet with Kalmar Insight.

Kalmar Insight is a performance management tool for cargo and material handling, which gives you a valuable and easy to use overview of your daily operations based on equipment status and performance, making it quicker for you to take action on relevant information that will help you improve your operations, your equipment's performance and your business.

Kalmar Insight* comes fitted in all new Kalmar machines and can be retrofitted to existing Kalmar machines or those built by other manufacturers.



Kalmar Insight: view each machine's movements as they occur.



Plan your maintenance and spare parts needs.



Kalmar Insight: view each operator's performance in real time.

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



Kalmar Training Academy.

For your team to get the most out of their new forklift the Kalmar Training Academy offers a range of courses for both your technicians and operators. Operators will be shown how to optimize their day-to-day operational performance and what needs to be checked daily before operations begin.

Technicians will be given the knowledge needed to keep your new truck in top condition. Courses are a mix of theory and hands-on experience and can be held at Kalmar or at your site.

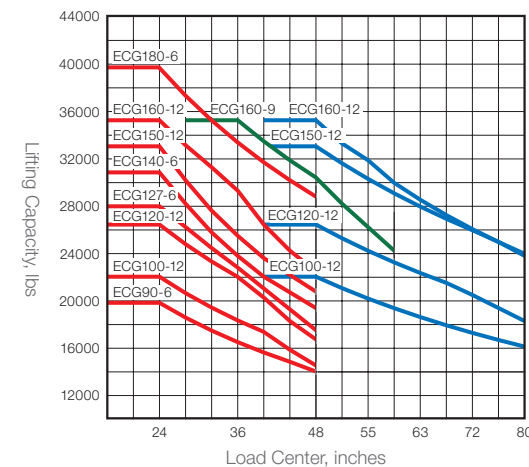
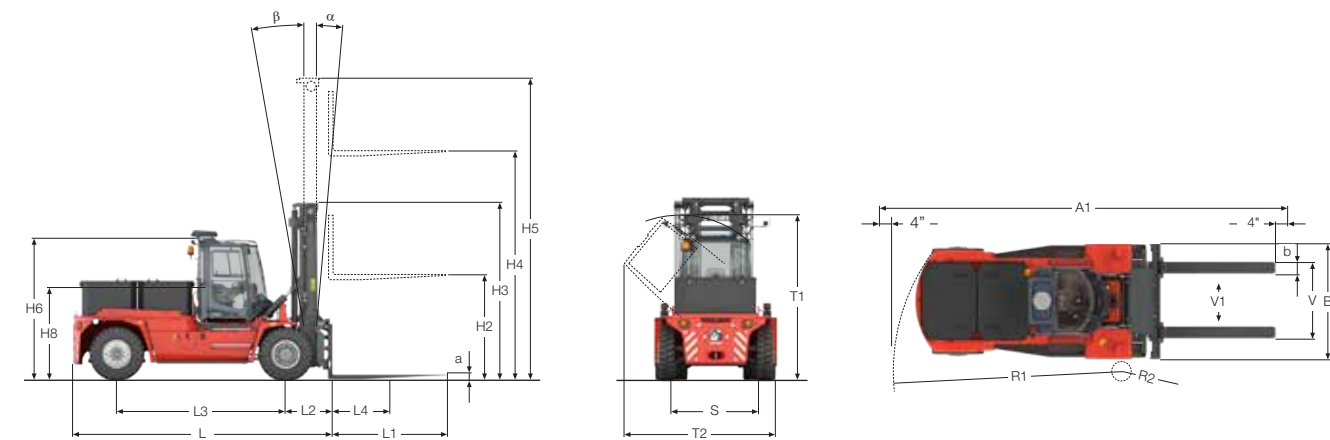
Performance.

			ECG 90-6	ECG 100-6	ECG 120-6	ECG 127-6	ECG 140-6S	ECG 140-6	ECG 100-12S	ECG 100-12	ECG 120-12S	ECG 120-12	ECG 150-6S	ECG 150-6	ECG 150-12	ECG 160-6S	ECG 160-6	ECG 160-9S	ECG 160-9	ECG 160-12	ECG 180-6S	ECG 180-6	ECG 70-35E3	ECG 70-35E4	
PERFORMANCE	Lifting speed @ 70%	Unloaded	fps	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.63	1.63	
		At rated load	fps	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.63	1.63
	Lowering speed	Unloaded	fps	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48
		At rated load	fps	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63
	Traveling speed, F/R	Unloaded	mph	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
		At rated load	mph	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
	Gradeability, max	Unloaded	%	32	32	32	30	30	27	28	26	25	24	27	26	23	26	24	24	23	22	24	23	20	19
		At rated load	%	21	20	19	17	17	16	18	17	16	16	15	15	14	14	14	14	14	13	13	13	16	15
Gradeability, at 3mph	Unloaded	%	28	28	28	26	26	24	24	23	22	21	24	23	20	23	21	21	20	20	21	20	18	16	
	At rated load	%	18	18	17	15	15	14	16	15	14	14	13	13	12	13	12	12	12	12	12	12	11	14	
Drawbar pull		kN	56	56	56	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	
Noise level, inside*	LpAZ, EGO Cabin	dB(A)	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	
	LpAZ, EGO Cabin OHG	dB(A)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Noise level, outside**	LwAZ	dB(A)	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	

* According to EN12053
** According to 2000/14/EG

Driveline.

			ECG 90-6	ECG 100-6	ECG 120-6	ECG 127-6	ECG 140-6S	ECG 140-6	ECG 100-12S	ECG 100-12	ECG 120-12S	ECG 120-12	ECG 150-6S	ECG 150-6	ECG 150-12	ECG 160-6S	ECG 160-6	ECG 160-9S	ECG 160-9	ECG 160-12	ECG 180-6S	ECG 180-6	ECG 70-35E3	ECG 70-35E4	
DRIVELINE	Drive axle - type		Differential and hub reduction																						
	Drive motor, hourly capacity		2 x 49.6 hp (37 kW)																						
	Speed control, principle - number of steps		High frequency MOSFET, AC - Stepless																						
	Pump motor hydraulics, intermittent capacity – duty factor		2 x 67 hp (50 kW) - S3 15%																						
	Pump motor brakes, intermittent capacity – duty factor		1 x 6.8 hp (5.1 kW) - S3 15%																						
	Pump control, principle - number of steps		High frequency MOSFET, AC - Stepless																						
BATTERY LEAD ACID	Number of batteries		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	Dimensions, 'X'x'Y'x'Z' (WxLxH)	in	1638x718x780	1638x718x780	1638x718x780	1638x718x780	1638x718x780	1638x862x780	1638x718x780	1638x862x780	1638x862x780	1638x998x780	1638x718x780	1638x862x780	1638x862x780	1638x1150x780	1638x862x780	1638x998x780	1638x998x780	1638x1150x780	1638x1150x780	1638x998x780	1638x1150x780	1638x1150x780	1638x1150x780
	Capacity at 5h discharging - voltage	Ah - V	2x 620 - 120	2x 620 - 120	2x 620 - 120	2x 620 - 120	2x 620 - 120	2x 775 - 120	2x 620 - 120	2x 775 - 120	2x 775 - 120	2x 930 - 120	2x 620 - 120	2x 775 - 120	2x 1085 - 120	2x 775 - 120	2x 930 - 120	2x 930 - 120	2x 1085 - 120	2x 1085 - 120	2x 1085 - 120	2x 930 - 120	2x 1085 - 120	2x 1085 - 120	2x 1085 - 120
	Max charging current	A - V	125 - 120	125 - 120	125 - 120	125 - 120	125 - 120	150 - 120	125 - 120	150 - 120	150 - 120	185 - 120	125 - 120	150 - 120	215 - 120	150 - 120	185 - 120	185 - 120	185 - 120	215 - 120	215 - 120	185 - 120	215 - 120	215 - 120	215 - 120
	Battery weight (1 battery)	lbs	5315	5315	5315	5315	5315	6330	5315	6330	6330	7475	5315	6330	8645	6330	7475	7475	7475	8645	8645	7475	8645	8645	8645
BATTERY LI-ION	Number of batteries		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	1	1	N/A	1	1	1	
	Battery Capacity	Ah - V	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1296-128	N/A	N/A	N/A	1296-128	1296-128	N/A	1296-128	1296-128	1296-128	



Lifting data.

Mast options.

Standard.

DUPLEX STANDARD, CLEAR VIEW	Lift height	Mast height		Free lift	
	H4	H3 min	H5 max	H2	
	ECG90-180				
	118	126	185	-	
	128	131	195	-	
	138	136	205	-	
	148	141	214	-	
	157	145	224	-	
	177	155	244	-	
	197	165	264	-	
217	175	283	-		
236	185	303	-		
256	195	323	-		
276	205	342	-		

Duplex mast:
118"-276"



DUPLEX FULL FREE LIFT, CLEAR VIEW	Lift height	Mast height		Free lift	
	H4	H3 min	H5 max	H2	
	ECG90-180				
	118	126	185	59	
	128	131	195	64	
	138	136	205	69	
	148	141	214	74	
	157	145	224	79	
	177	155	244	89	
	197	165	264	98	
217	175	283	108		
236	185	303	118		
256	195	323	128		
276	205	342	138		

Duplex full free mast:
118"-276"



TRIPLEX FFL, CW	Lift height	Mast height		Free lift	
	H4	H3 min	H5 max	H2	
	ECG90-180				
	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 mast:
177"-276"



Cabin, EGO

- ANSI/ITSDF B56.1 Safety Standards for High Lift Powered Industrial Trucks
- Standard full suspension seat including 2-point orange seatbelt
- Clear windows including sliding windows in left and right doors
- Complete doors with locks left and right side
- Complete maneuver system rfeatures electric adjustable right-hand console including standard display (electric adjustable)
- Multi function left side lever including horn, direction indicator, high and low beam.
- Brake system with pedal left and right side
- Internal comfort including mirrors, handles, interior lighting etc.
- Wiper and washers front/rear and roof window
- Hydraulic steering system including steering wheel with steering wheel knob
- External reverse lights
- Heat and ventilation climate control with fresh air inlet filter
- Speed control pedal right side.
- Kalmar standard key system
- Reverse camera with monitor in cab.

Driveline

- Steering axle: Kalmar
- Drive axle: Kessler hub end with wet disc brakes
- Motor: Drive motors, 2 x 49.6 hp (37 kW)
- Hydraulics pump motors, 2 x 67 hp (50 kW)
- Accumulator pump motor, 6.8 hp (5.1 kW)
- Power electrics: 120V AC-technology.

Hydraulics

- Electric servo
- 2 functions
- Environment-friendly breather filter, hydraulic tank.

Body

- Tilttable cab
- Steps with anti-slip protection
- Standard mast tilt angles 14F/10B
- Lifting eyes in mast.

Electrical system

- Electrical system, 24 V
- Rear lights and brake lights, LED
- Working light front fenders 2 pieces, LED
- Working light mast 2 pieces, LED
- Flashing brake lights when reversing
- Indicator lamps including hazard lights, LED
- Main power switch
- Battery for 8 hours normal intensity operating time and central water topping system option (lead-acid battery).

Wheels

- ECG90-160: 12.00x20/20PR
- ECG180: 12.00x20/20PR HD.

Fleet management

- Equipped with telemetric hardware for Kalmar Insight.

Colour

- Cabin: Kalmar Grey (Base ref RAL 7037/75)
- Chassis: Kalmar Red 2012 (Base ref RAL 3000/75)
- Lifting equipment: Kalmar Black (Base ref RAL 7021/30).

Documentation and decals

- Operators manual (printed)
- Maintenance manual (electronic)
- Parts catalogue (electronic)
- Load diagram in cabin
- Warning decals
- Information decals
- Diagram, fuses.





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