

Kalmar 5 – 9 tonnes For operations beyond the ordinary

PRO FUTURE 



Sales brochure



A lift for the environment

More and more, operating in today's climate is a tough balancing act of meeting ever higher productivity targets while minimizing impact on the environment.

With the Kalmar ECF50-90L electric range, it's easy to meet demands for a better environment. There are no emissions. No CO2 from fossil fuel burning. In addition,

the ECF runs more efficiently, with reduced energy consumption. So you can rest assured you've got an environmentally responsible solution.

At the same time, Kalmar trucks are well known for their ergonomic design. We offer alternative cab solutions to meet your requirements for ultimate driver comfort.

Noise levels, for the driver and to the surroundings, are surprisingly low. Vibrations are minimal, and all of our cabs ensure user friendliness and safe handling.

Smooth and uplifting, operation of the ECF50-90L is a breath of fresh air.



An investment that saves

Designed to improve lifetime economy, the benefits of the Kalmar ECF50-90L electric range are airtight – fewer components, less maintenance and lower energy costs.

Our modern range uses well-tested, components. With AC technology, the motors have no carbon brushes. Nor are there any contactors for directional switch or regenerating, since the driving functions are controlled

by electronics. Fewer hydraulic connectors reduce the chance of hydraulic oil leakage. So altogether, there's less maintenance.

Kalmar trucks are developed from the start for heavy-duty applications, so you can depend on exceptional durability and reliable operation. Savings in energy consumption means you get optimized use of battery power.

You also gain in productivity with outstanding ergonomics and high performance. What's more, an investment in an electric truck today means less worry about tomorrow's rising fuel costs.

Add it up for a great return on your investment.



Efficiency that goes the distance

Performance is not just about muscle. That's what our customers say. The ideal forklift truck should be robust to meet demanding applications, while also boosting efficiency with precise control, optimal energy consumption and minimal downtime.

The Kalmar ECF50-90L electric range features a highly efficient dual drive and hydraulic system which save on

energy use and thus help to ensure a longer battery cycle. With the ECF hydraulic system, you only run the pumps when needed, from zero to maximum speed depending on what is required.

Quality components and intelligent electronic systems contribute to improved driveability and response that in turn increase efficiency. Our truck design also ensures

more effective steering, by controlling the utilization of flow and pressure needed to steer in each moment. With regenerating, incremental decreases or full release of the speed pedal or braking will result in battery re-charging.

With advantages like these, you're ready to take the lead.

A first rate solution

The Kalmar ECF50-90L electric range brings winning performance, with modern technology designed to provide a more responsible environmental solution as well as optimized energy consumption and improved economy.

Innovative features are the result of Kalmar's long experience in material handling and close collaboration with our customers.

Driving performance

Electric traction motors combined with electronic control system provide excellent driving, rapid response to driver actions and smooth transitions when accelerating, decelerating, starting and stopping. The speed of each motor can be controlled individually. The truck design provides outstanding maneuverability. Independent control of the wheels makes it easier for the forklift to turn. A feature of all ECF trucks, anti-spin is enabled by the electronic differential.

Training

To help ensure you get the most out of your truck, Kalmar offers training and technical documentation.

Safety

With a durable design and machine stability, Kalmar trucks meet the highest demands for safe operations.

Service access/inspection points

Inspection and servicing is straightforward and uncomplicated. A tiltable cabin gives total access to the engine compartment. Components and filters are conveniently placed.

Exceptional quality and superior ergonomics mean your truck and driver are ready to lift your operations to the top.

Lifting performance

Equal to the high standards you can always expect from Kalmar, the new ECF trucks have a robust design with numerous lifting options, optimum visibility and machine stability to handle loads efficiently, quickly and safely.

Parts and service

We respond quickly to help you most effectively run and maintain the truck. Our engineers are available for immediate consultation. Comprehensive technical documentation covers all aspects of operating the truck. We deliver spare and replacement parts around the clock. Support programs can include regularly scheduled onsite service, preventative and unplanned maintenance as well as upgrades. With a fixed price package, you know in advance exactly how much it will cost. For your convenience, we can take full responsibility for maintenance and ensure you always have the right truck, in the right place, at the right time.

Optional financing solutions

Kalmar provides a comprehensive range of options for owning, renting and servicing the trucks. You can choose the purchase program or leasing package that is most favourable for your business and cash flow.



Driver cabin

Alternative cab solutions meet your specific requirements for robust-ness, space, climate, and control of machine functions. The ECF design includes improvements in visibility.

Kalmar Control System with CAN-bus interface

A well-proven innovation from Kalmar Industries, the Kalmar Control System (KCS) displays information on operation, diagnostics and alarms on the steering wheel panel. A KCS feature, the CAN-bus interface follows the international standard CAN-open and enables more precise diagnostic measurements.

Electric servo

Now included. The new electric servo responds smoothly and supports better ergonomics.



Alternating Current technology

AC technology enables more efficient motor and pump operation as well as an improved control system. With greater efficiency, you can depend on a longer battery working cycle. Less mechanical parts, no carbon brushes or contactors for directional switch or regenerating, and ease of service access all reduce down-time. This, in turn, contributes to a better cost of ownership.

Hydraulic system optimized to electric drive

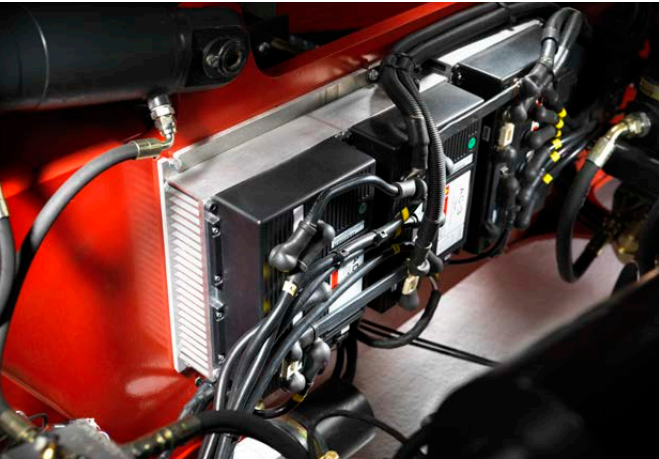
The hydraulic system is designed with components and layout to optimize the electric drive train. This contributes to less wear and more efficient use of the pumps, and helps to save energy.



Efficient battery operation

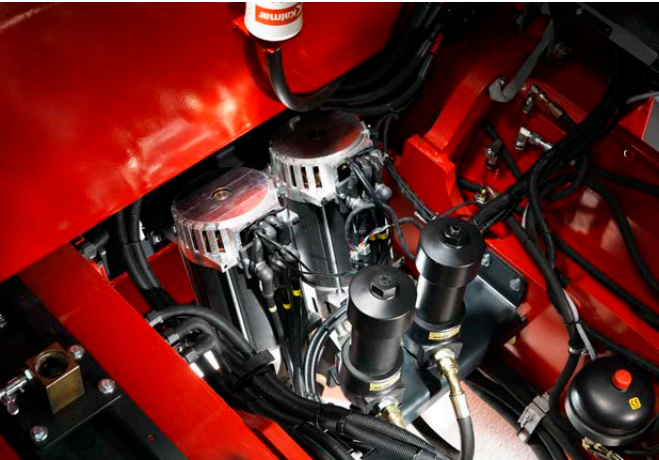
The battery is located behind the cab, so that the operator is not sitting on or right next to the power supply. Access is easy. Among the options, the battery can be fixed, pulled out or lifted with fork pockets.

With ECF, savings in energy consumption mean you get a longer battery run time. For operations requiring continuous use of the truck for several shifts, Kalmar offers complete solutions for battery exchange system.



Robust for long usage and heavy loads

Designed for tough applications and extended operation, ECF features a robust build, optimizal thermal dissipation and precise control of functions for most effective use of energy.



Dual system for superior control

With electric traction motors and hydraulic system, the ECF provides a smooth and efficient operation. The speed of each motor can be controlled individually.

Raising the standards in quality, piston pumps run only when the application requires it, which also saves on energy.



Optimized steering

Precise steering and drive wheel, along with anti-spin, provide high response and safe driving as well as less wear on the wheels.

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



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