

# Hiab Moffett E-Series - Pro Future™

## The electric Truck-mounted forklift



Product Brochure



Turning visions into  
a new generation  
of technology



# The first all electric Truck-mounted Forklift

## Introducing the Hiab Moffett E-Series

Hiab Moffett Truck-mounted forklifts are a familiar sight on the back of trucks and trailers operating on sites and depots across the globe.

The comprehensive model range has constantly been extended over the years paving the way for another technological landmark - the world's first Lithium-ion powered electric Truck-mounted forklift. The benefits of this unique load handling device are now available to a wide range of new application areas.

The Hiab Moffett E-Series models are setting new standards in placing environmentally responsible technology on the back of your truck or trailer, while significantly reducing the total cost of ownership.



## At a glance



Emission Free



Silent Operation



Reduced Cost of Ownership



Easy Charging

e-power -  
ready in less than one minute -  
any time day and night





# Designed for outside to inside operation

## The Truck-mounted forklift for your business

### Warehouse deliveries

The Hiab-Moffett truck mounted forklift has a proven track record of saving time and money for businesses across all industries.

The new emission free E-Series is ideal for operations that require the movement of goods from outside to inside such as warehouses and distribution centres.

With a lift capacity up to 2,000kg, a powerful one-wheel drive traction system and a tight turning circle, this agile forklift is capable of accessing the most confined areas.

The new E-Series reduces the need for additional warehouse material handling equipment.

### City distribution

The highly manoeuvrable Truck-mounted forklift is ideal for urban deliveries in locations where access is restricted and low noise is paramount.

Deliveries are made without any engine noise or emissions, allowing the operator to travel right to the point of delivery. This ensures faster delivery times and reduced product damage.

The E-Series will accelerate the swift logistical support of your organisation, improving the level of service you provide to your customers giving you a competitive edge and the opportunity to increase your customer base.

### Night-time operations

Night time delivery operations are often faced with stringent noise regulations e.g. within residential areas.

The new E-Series is a low noise and zero emissions machine designed for this growing area of business, minimising the impact of air and noise pollution and helping speed up the delivery process.

By incorporating this new electric Truck-mounted forklift into a delivery system it enables greater flexibility in planning out of hour's deliveries.





"Because of traffic volumes during the day we do all our deliveries at night. Some of the depots we deliver to are in built up areas and the silent running Truck-mounted forklift is ideal to ensure that we cause minimum disruption to local residents while taking into account operational needs and costs."

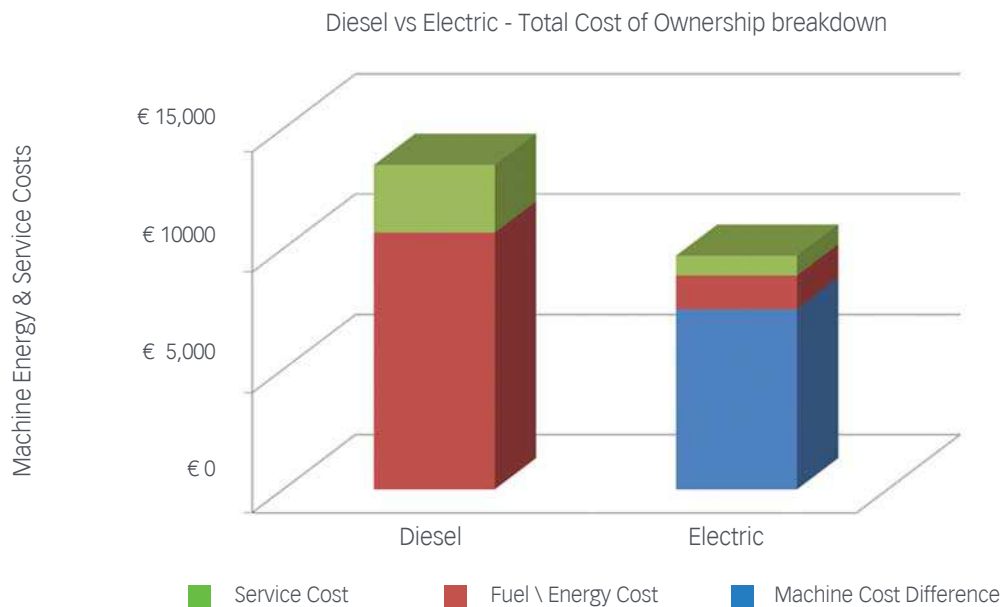
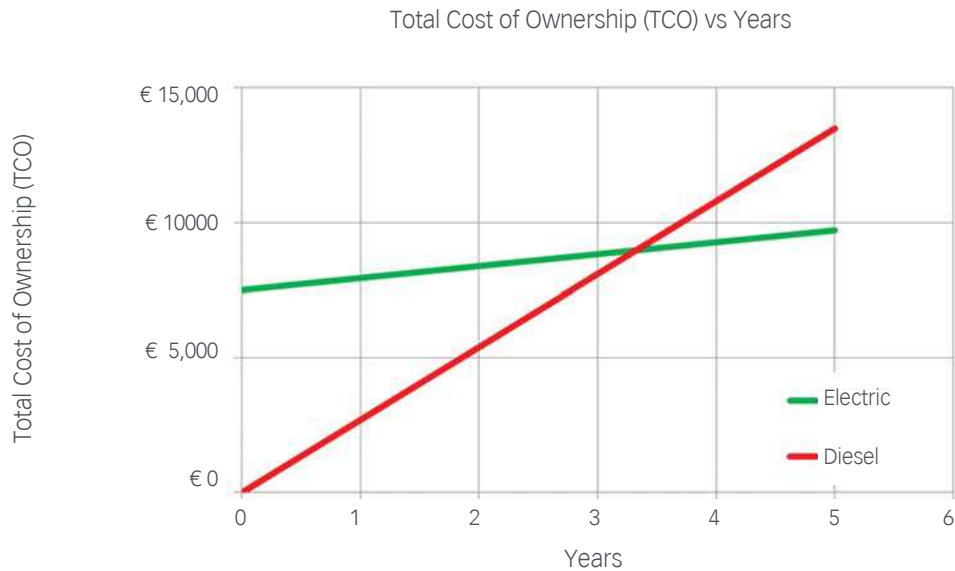
Mark Wilson, Transport Manager  
FPS, Sheffield, South Yorkshire, UK



The Truck-mounted forklift  
that pays its way

# Total Cost of Ownership

In developing the New E-Series Truck mounted-forklift for our customers, Cargotec has considered the key importance of Total Cost of Ownership (TCO). The data below shows a comparison between Diesel and Electric for the same given duty cycle:



\* Data based on estimated machine cost difference, energy figures from Eurostat, service figures based on averages from main TMFL EU markets, based on annual 300hrs and 5 years ownership.

The new E-series electric Truck-mounted forklift with Lithium-ion technology offers the best return on investment in industrial applications like food, night time deliveries and urban applications. With its low noise and zero emissions it has the ability to go where no other Truck-mounted forklift has gone before, giving increased flexibility and utilisation.



Unbelievably quiet





# Durability & Performance

## Batteries

The E-Series models are equipped with the latest Lithium-ion battery technology resulting in a number of advantages:

- > High number of charge cycles
- > Faster charging and lower self-discharge
- > Longer operating hours with constant performance
- > Lower weight
- > No gassing during charging or storage



## Charging

The E-Series models are fitted with an on board charger providing complete flexibility in terms of charging location and specification of carrier vehicle.

Depending on battery size the forklift can be fully charged from as little as 3 hours.



## Battery Charge Time vs. Battery Size



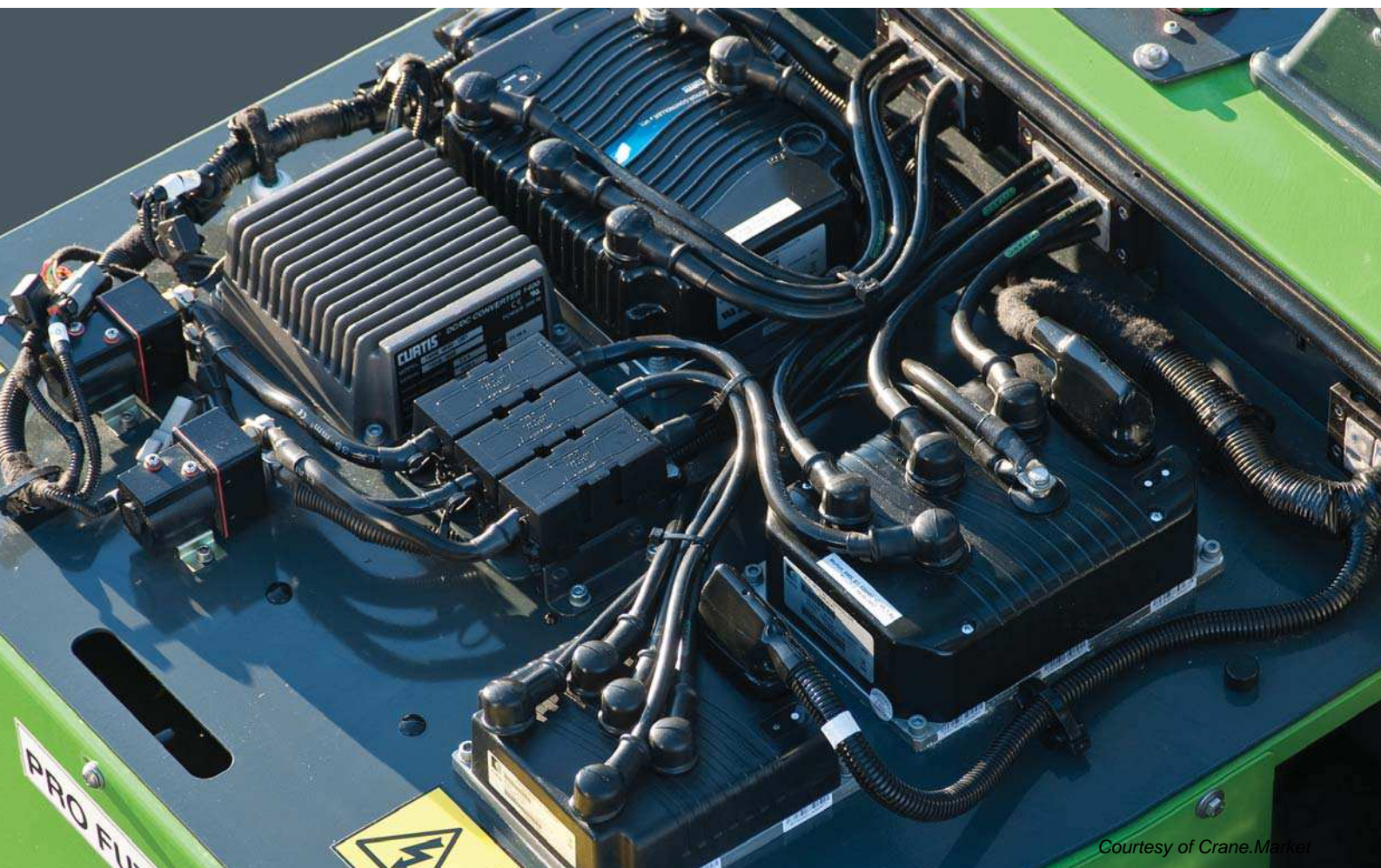
## Control Systems

The controls are designed to give the easiest transition for operator training while utilising all the benefits of an electronic control system:

- > Automotive Forward/Reverse Control
- > Foot pedal throttle by wire ability to interlock and program
- > Hydraulic levers with programmable speeds for Lift, Reach, Tilt and Sideshift
- > Steering safety ability to program limits for angle vs speed for improved safety
- > Seat belt and seat presence interlocked operation
- > Electronic CAN BUS control carrying all the control signals in a two wire system
- > Steer by wire ability to interlock and program steering response and resistance

## Power Systems

- > All motors are latest AC technology which means they are easier to seal and they have no contacts that require service
- > The latest programmable AC controllers are used which are capable of smoothly converting the battery DC current to AC for the motors
- > The controllers also control the machines functionality and safety
- > The powerful rear traction motor drive assembly is fitted with a 21" tyre and has a totally enclosed drive system
- > The hydraulic system is driven by a silent helical pump which supplies oil to the main hydraulic functions





# Leading Technology



## Dash Display



- > The main display is sealed to IP65 and features integrated switches that are used for indicators, lighting and horn, as well as doubling up as navigation for the display menus
- > The main display shows State of Charge (SOC) and a Power Meter showing how hard the machine is being used as well as regeneration indicator showing when the machine is generating charge for the batteries
- > Other display parameters such as hours run, service countdown and direction selection are shown at the bottom of the screen
- > Separate menus for OEM, Service and operator parameters are available to allow the machine to be monitored without the need for a laptop
- > The display also features an alarm window which shows operator interlock alarms in blue and system alarms in red
- > A separate charging screen is displayed when the battery is on charge which incorporates a low temperature alarm

# Leading Technology

## Ergonomics

- > Spacious open cabin design for maximum visibility and comfort
- > Tinted all-weather overhead guard cover
- > Easy reach control levers
- > Comfortable pedal and steering
- > Operator friendly entry/exit with slip resistant steps and easy reach grab handles
- > Smooth driving control
- > Optional: Remote Ground Mount™ System



## Safety

- > Maximum Visibility (360 degrees)
- > Overhead Guard ROPS/FOPS tested
- > Interlocking seat belt and operator controls
- > Programmable steering response vs. speed for increased stability
- > Flashing beacon, work lights and reverse bleeper
- > LED road lights for transport on truck/trailer

## Performance

- > Compact and highly manoeuvrable
- > Powerful rear wheel traction
- > Low unladen weight
- > Ability to handle goods from outside to inside
- > Ultra Low Noise
- > Zero Emissions

## Maintenance

- > Long service intervals
- > Reduced Total Cost of Ownership
- > IP 65 proof electrical components
- > Easy access to all serviceable parts
- > LED lighting for longevity and less maintenance
- > Weather and corrosion resistant features include:
  - Plastic conduit protecting wiring harness
  - Powder-coat paint
  - Nitrotec treated pins





# Technical Specification



	E2 12.1	E4 20.1
Lifting Capacity	1,200kg @ 600mm	2,000kg @ 600mm
System Voltage	48v	48v
Battery Capacity *	100Ah (130Ah)	130Ah (180Ah)
Standard Tyres	400x4/21x8-9	18x7-8/21x8.9
Drive Wheels	Single Rear 21"	Single Rear 21"
Unladen Weight*	1590kg	1680kg
Overhang*	1160mm	1160mm
Ground Clearance	190mm	190mm

The above specifications can be changed by the manufacturer without prior notice.

\* The values vary depending on machine specification.  
Optional capacity in brackets



# Environmental Responsibility

## Helping to protect the environment - every working day



Hiab Moffett, the industry pioneer and market leader is once again setting the standards, placing environmentally responsible technology on the back of your truck.

The new E-Series models come with all that makes Hiab Moffett the most popular Truck-mounted Forklift in the world - minus the CO2 emissions.

With exceptional durability and reliability, together with the guaranteed quality you have come to expect, this machine sets the standard in environmental responsibility.

### PRO FUTURE

Pro Future™ is Cargotec's own marking for products and solutions with less environmental impact. These products and solutions have passed certain industry-leading criteria regarding energy efficiency, the power source, emissions, noise pollution and recyclability.

By investing in equipment with the Pro Future™ seal, you gain the ability to develop operations with improved sustainability while at the same time reducing your cost of operation considerably.




Accredited with the Quiet Mark by the Noise Abatement Society, the E-Series has been recognised for its outstanding quiet technology, helping to reduce the noise levels in our environment.

For more information:  
<http://www.quietmark.com>





A full-page background image of a bright blue sky with scattered white, fluffy clouds. The clouds are more concentrated in the lower half of the image, creating a sense of depth and openness.

The world's first Lithium-ion powered  
Truck-mounted Forklift will increase the efficiency  
of your fleet with zero fuel consumption and the  
satisfaction of knowing that you are protecting the  
environment for future generations

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 sales totalled EUR 3.1 billion in 2011 and it employs approximately 10,500 people. Cargotec's class B shares are quoted on NASDAQ OMX Helsinki under symbol CGCBV. [www.cargotec.com](http://www.cargotec.com)



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