

“Driving towards zero-emission operations with Kalmar’s solutions”

Marco Tosi, Kalmar



Kalmar at a **GLANCE**

Kalmar is part of Cargotec.

Personnel of **5,000**

Sales **1.9B€**

Operations in **35**
countries

Widest range

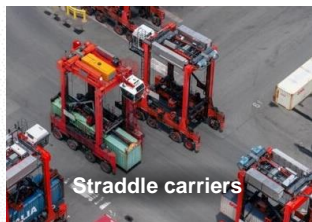
of cargo handling
solutions to ports,
terminals, distribution
centres and to heavy
industry.

Global service network

with over **1,300** service
and support
professionals in
120 countries.

Industry leader

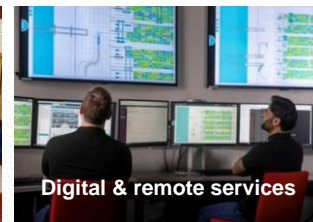
in eco-efficient cargo
and material handling.



Straddle carriers



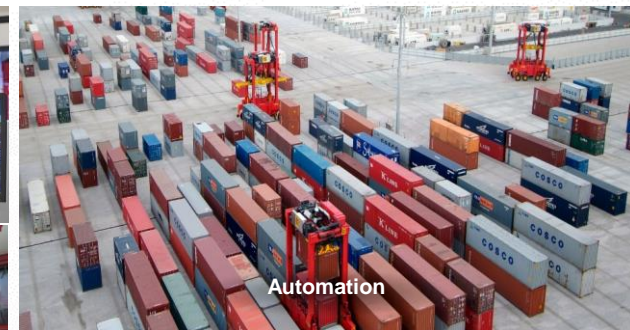
Bromma spreaders



Digital & remote services



Consulting & Training



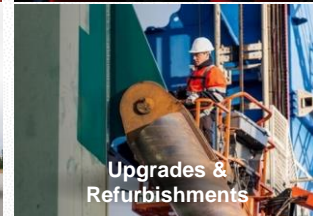
Automation



Reachstackers



Empty container handlers



Upgrades &
Refurbishments



Used Equipment



Terminal tractors



Forklift trucks



Spare parts



Maintenance



Robotics

EQUIPMENT

SERVICES

AUTOMATION & ROBOTICS

Extensive range of

SOLUTIONS

for cargo and material handling



An aerial photograph of a large port facility. In the foreground and middle ground, there are vast stacks of colorful shipping containers (red, blue, yellow, green) and several large red gantry cranes. To the left, two tall white wind turbines stand prominently. In the background, a city skyline is visible under a cloudy sky. The overall scene represents a blend of industrial activity and sustainable energy.

Our

PURPOSE

is to make our industry **safer**,
more **sustainable** and **productive**.

DESIGNING

a future proof and sustainable terminal



Operational efficient

Productive, low handling unit cost.



Financially viable

Possible to adapt to changes in business environment.



Emission free

Zero emission at source.

Challenge: **How to manage all 3 aspects at the same time?**

Strong interest in the new

Kalmar Electric Reachstacker

“ The new Kalmar Electric Reachstacker will play a key role in helping us to achieve our target of zero emissions by 2030. Our investments in electrification, hybrid solutions and biodiesel will enable us to reduce our emissions by 56% in 2022.

Kurt A. Ommundsen, CEO Westport Norway



Kalmar Eco Reachstacker.

Guaranteed to reduce fuel consumption and emissions

Kalmar's eco-efficient Reachstacker is **guaranteed** to substantially reduce your fuel consumption and cut your costs.

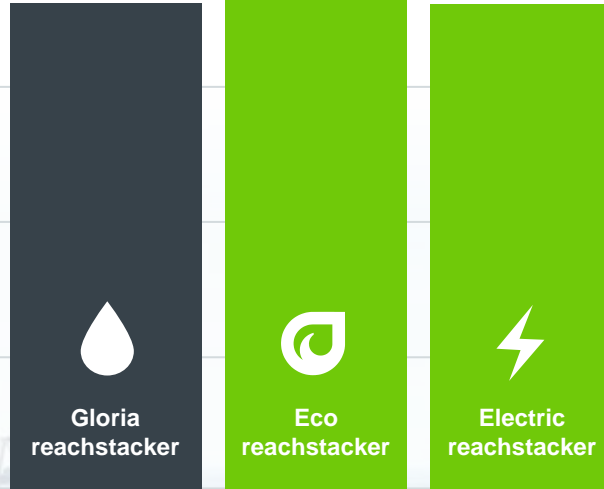


ECO EFFICIENCY
IN ACTION

Comparing the operational performance of Reachstackers

Operational performance (machine productivity)

+5%



Equipment assumptions

- › Same machine model sizes and capacities
- › Same drive cycle
- › Same Drive Mode setting for all machines

Comparing the total cost of ownership for Reachstackers

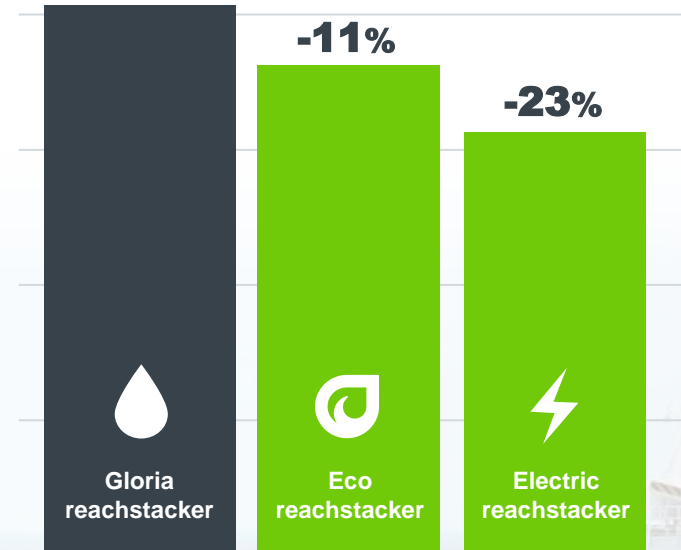
Equipment assumptions

- › Same machine model sizes and capacities
- › Basic configurations for all machines
- › 326 kWh battery for ERG450
- › Same drive cycle and energy consumptions
- › 3000 running hours/year

Cost assumptions

- › Diesel cost: 1,4 EUR/liter
- › Electricity cost: 0,15 EUR/kWh
- › No charger or infrastructure cost included

5 year total cost of ownership comparison

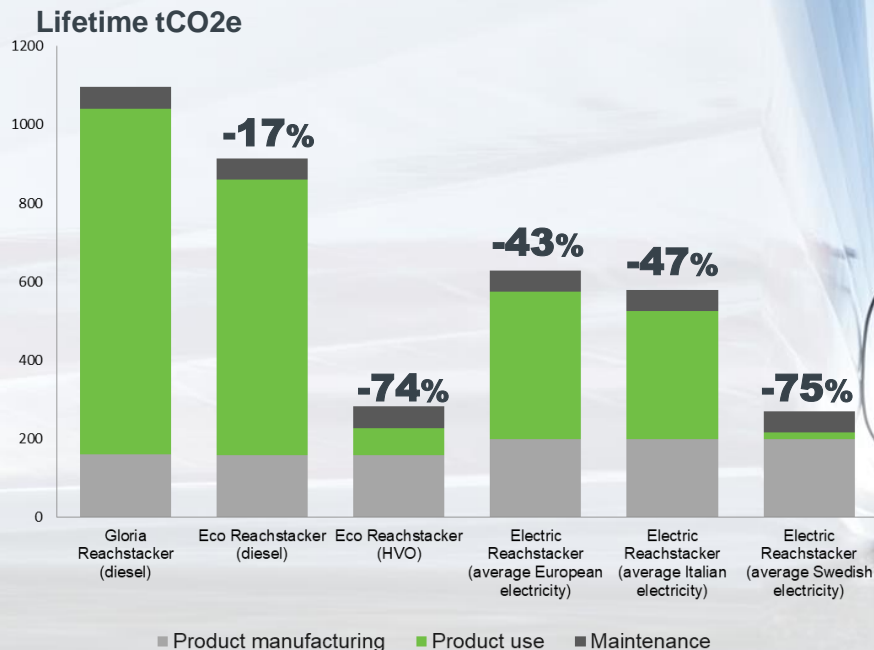


LIFETIME EMISSIONS for Reachstackers

Environmental considerations

The Eco Reachstacker offers a quick and easy emission reduction

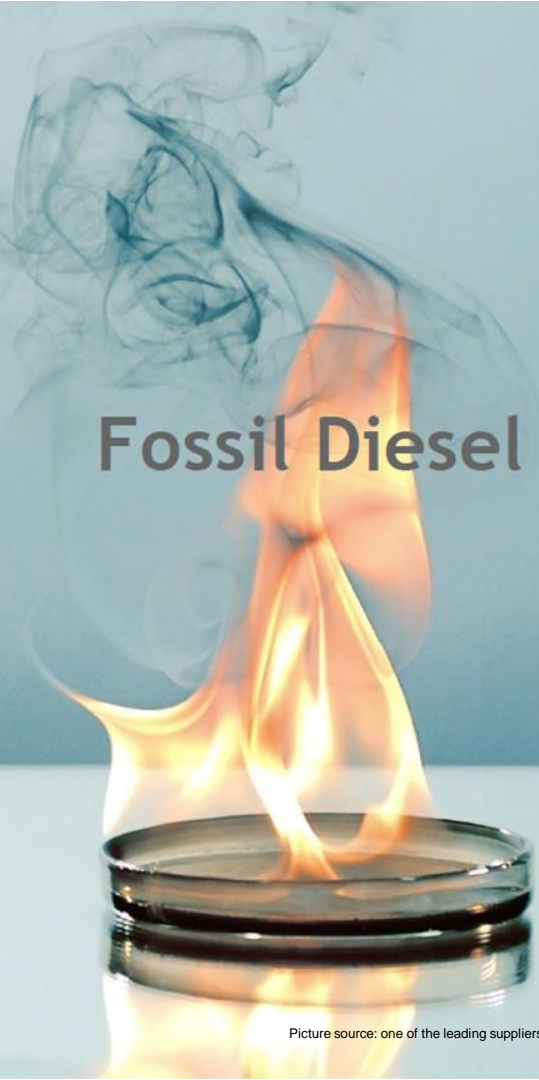
Electrification enables local zero emission operations, but depends on available electricity



**Renewable Diesel
HVO 100**



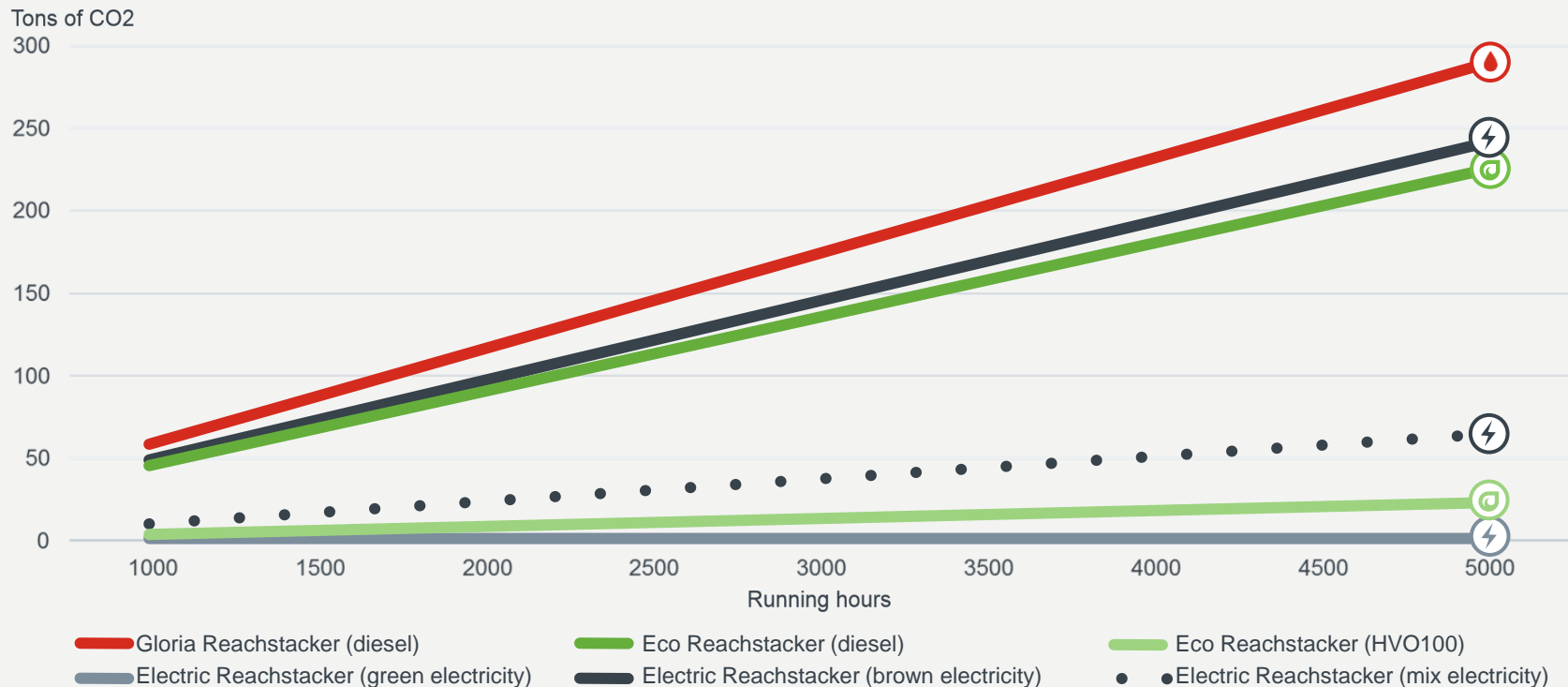
Fossil Diesel



Picture source: one of the leading suppliers of HVO100

NESTE

Tons of CO₂ emissions versus annual running hours



Electric Forklifts

9-18 TON

Lead-Acid and Li-Ion



ECO EFFICIENCY
IN ACTION

Electric Forklifts

18-33 TON

Li-Ion only



THANK YOU

for your attention



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