



The path towards zero emissions

DC fast-charging solutions for cargo ports



KEMPOWER





Kempower in a nutshell

- ▶ The Finnish electric vehicle DC fast charging solutions manufacturer.
- ▶ We envision a society powered by fully electric transportation, making the world cleaner and more sustainable.
- ▶ Our mission is to enable clean mobility by utilizing Kemppe Group's 70 years of experience in demanding electric power supplies
- ▶ Suitable for all electric vehicle types, like electric cars, buses, boats, and machines
- ▶ Listed on Nasdaq First North Growth Market since December 2021



283.6

MEUR (305.2M USD)
in revenue

275.3

MEUR (296.3M USD)
in order intake



174%

revenue growth
year-on-year

14.3%

Operative EBIT margin



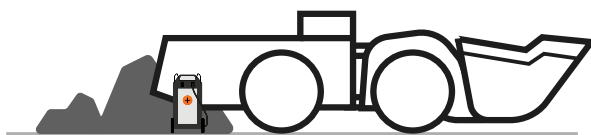
Trucks



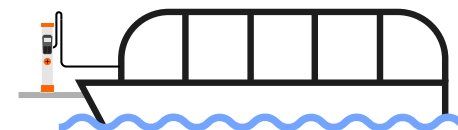
Cars



Buses



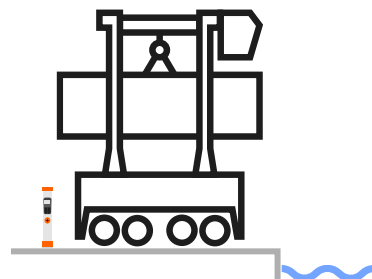
Mining



Vessels



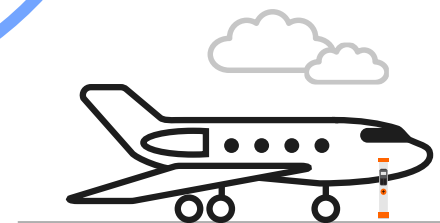
Vans



Harbor
Machinery



Construction Machinery



Airplanes

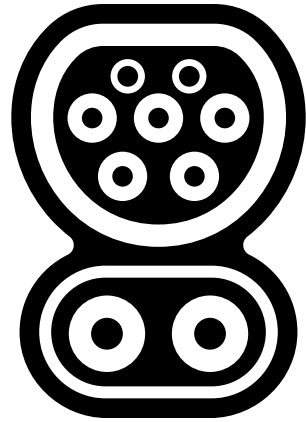


Agriculture

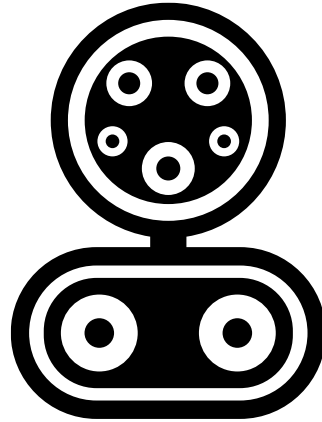
Our vision
is to create
the world's most
desired **EV charging**
solutions
for everyone,
everywhere.



Open Standards make port operators life easier



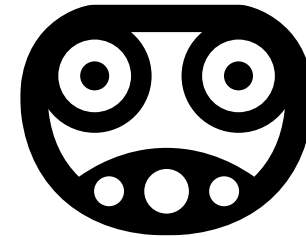
CCS2
(Global)



CCS1
(North America)



MCS
(Global)



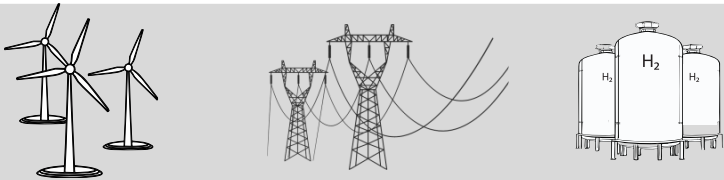
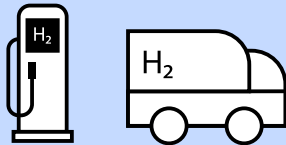

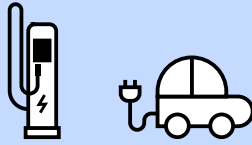
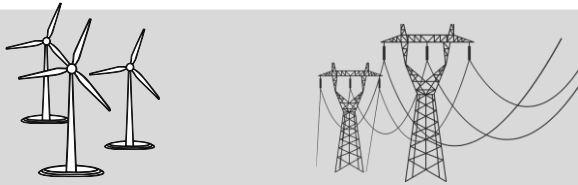
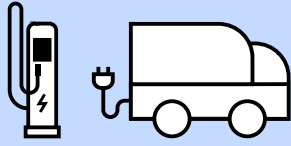


NACS
(North America)



Electric mobility

-our joined target to reduce CO₂ emission

Energy source	Well to tank (WTT) efficiency	Tank to wheel efficiency	Total efficiency
Diesel (reference)	 85%	 15%	13%
Green Hydrogen	 75%	 50%	38%
Electricity	 50%	 85%	43%
Renewable electricity	 90%	 85%	77%



Truck
charging



Low-power
charging



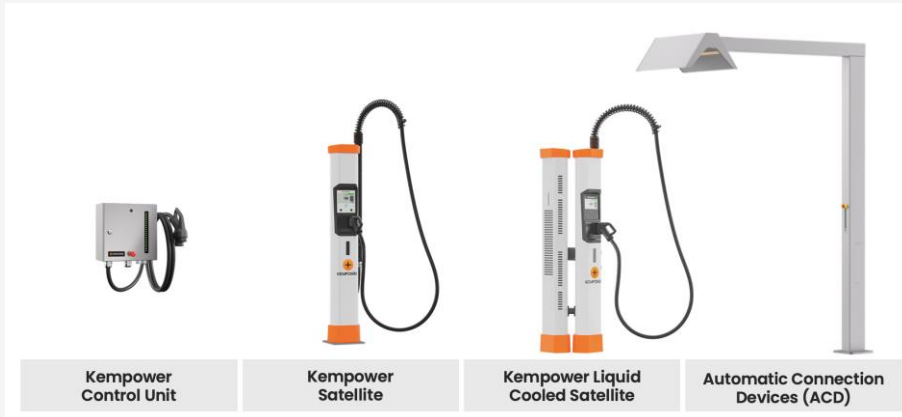
High-power
charging





Smart charging solutions improve TCO while navigating towards zero emission targets

Charging hardware solutions for Ports



Solution for depot charging (Terminal Tractors)

- Dynamic solutions for fleets
- Dispenser catalog, Powers up to 300kW

Solution for high powers (straddle, reachstacker...)

- Redundant high power up to 1.2 MW (CCS/MCS)

Why not make chargers smart with software



Main streams:

- Fleet control, optimization and predictions
- Energy management to support grid
- User friendliness



Challenges

- Uptime
- Utilization
- Space and changing site layout
- Smart charging





Your charging dispenser, your choice

Pick 8, connect 8



**Kempower
Control Unit**

Flexibility
when space
is tight



**Kempower
Satellite**

Solution for
smaller port
vehicles



**Kempower
Liquid Cooled
Satellite**

High power
solution for big
port vehicles



**Kempower
Pantograph
Up & Down**

Automatic Connection
Devices (ACD) for
autonomous charging



**Kempower
Megawatt Charging
System (MCS)**

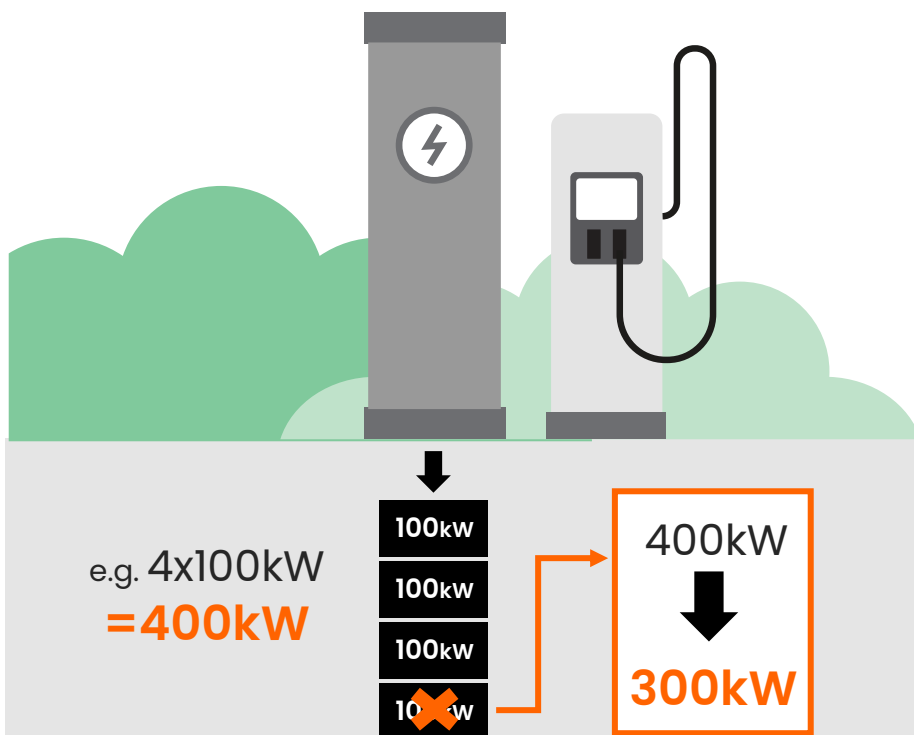
For mega powers



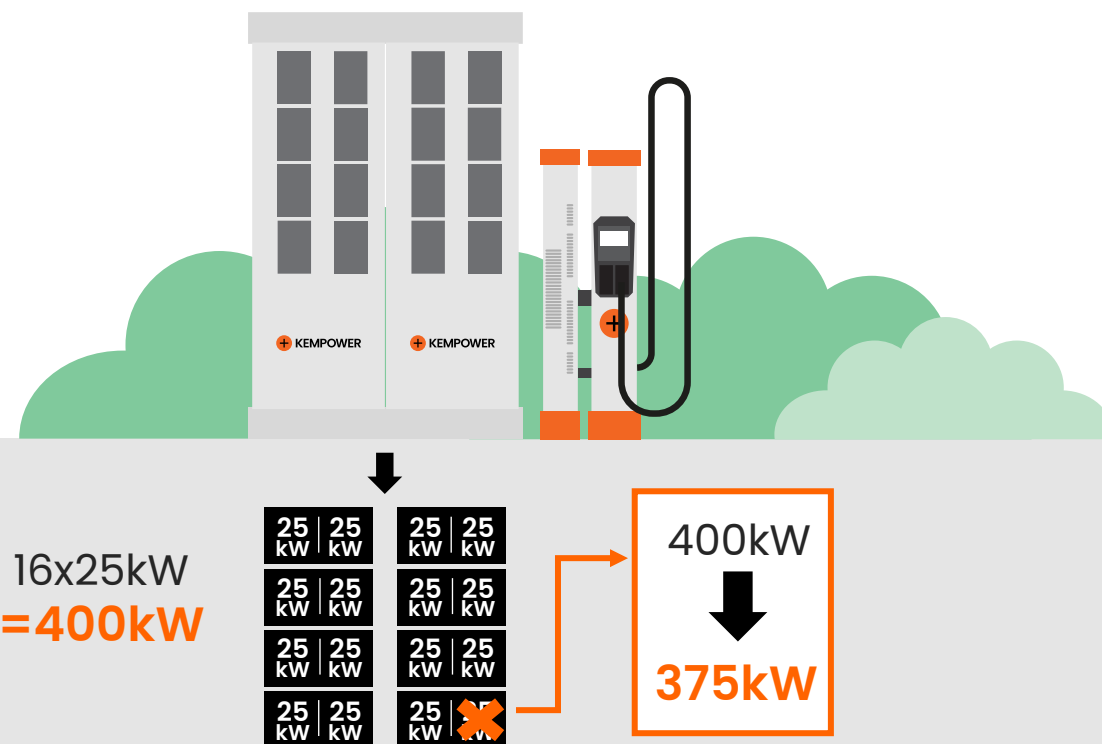
One module, many opportunities for redundancy & the highest uptime

Kempower's modular design increases system availability and decreases overall downtime. In case of failure, only a 25 kW power drop occurs.

Traditional charging solution



Kempower charging solution

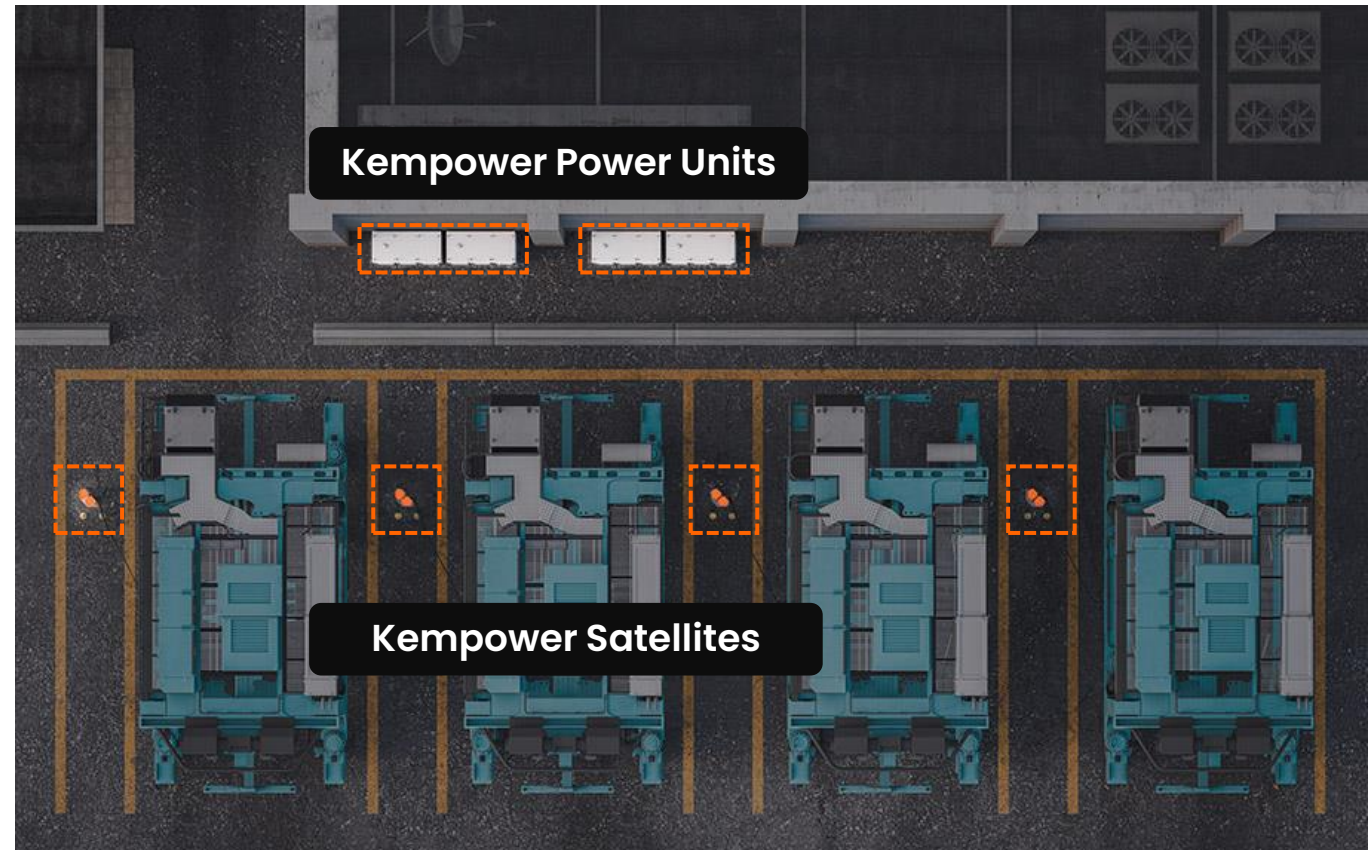




When space is tight, the Kempower Satellite Charging System is the solution

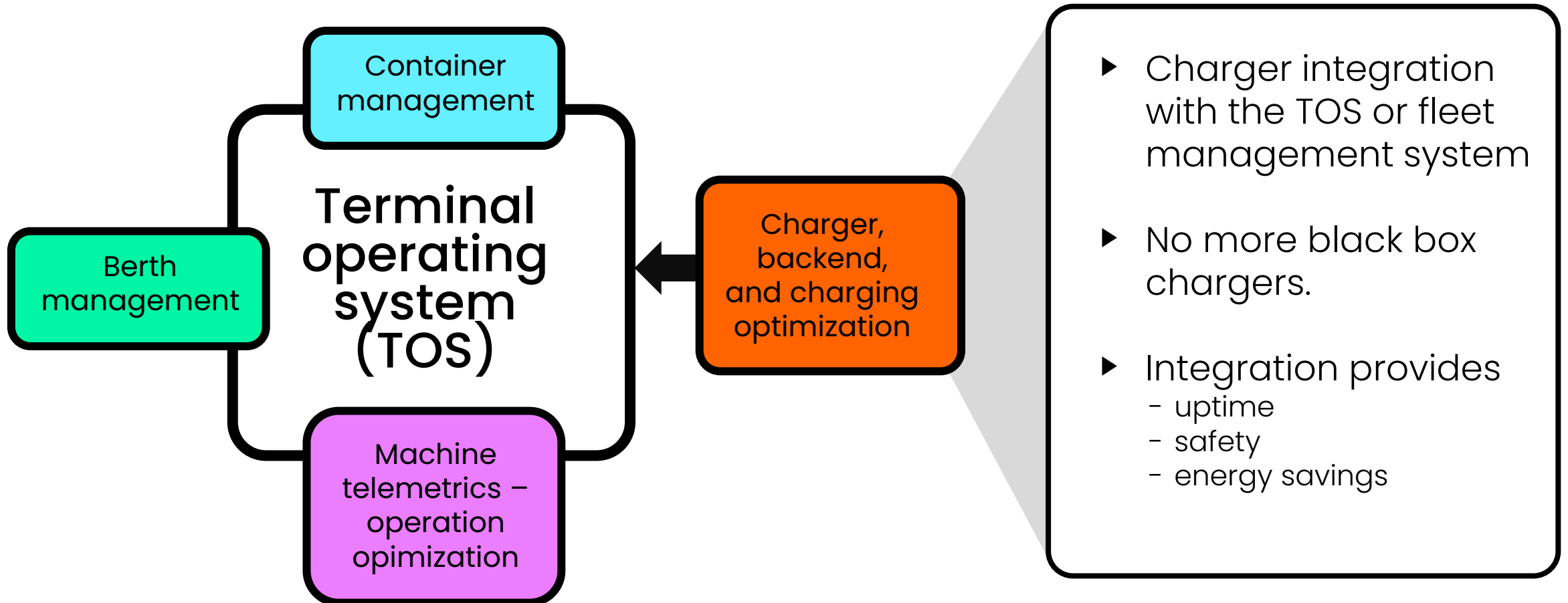
Kempower provides solutions for parking areas where space is limited

- The smallest footprint on the market – Kempower Satellite chargers are as compact as A4 paper. It's the efficient and space-saving charging solution.
- Unmatched flexibility – Maximum distance of up to 80 m between the Satellite and Power Unit, providing flexibility in design.
- Our satellite cable management system cuts cable weight by 60%.





What is Kempower ChargEye?





TOC 2024:

Kempower Booth A46

- Dispenser catalogue, MCS platform and software solutions for ports

Kempower "Happy Hour" tomorrow

- Deep diving to charging hardware and software solutions with our experts
- Boot A46
- 16:00