The image shows a close-up of a yellow surface with a circular silver sticker. The sticker features the text 'LI-ION' in a large, bold, black font, with the 'I' and 'O' being stylized. Below this, the word 'technology' is written in a smaller, black, lowercase font. The background is a bright yellow, and there is a dark, out-of-focus object in the upper right corner.

LI-ION
technology

Lithium-ion technology from Jungheinrich

Product presentation

JUNGHEINRICH

Why is Jungheinrich lithium-ion technology relevant for you?

YOUR BENEFITS AT A GLANCE

1 Lower overall costs compared to a lead-acid alternative

4 Short charging times: 30 minutes booster charge to 50%, 80 minute charge to 100%

7 Possibility of rapid and booster charging during breaks or downtimes for maximum truck availability

2 No battery maintenance, servicing or infrastructure costs

5 No special charging rooms with ventilation required

8 Three times longer service life than conventional energy storage

3 Around 21% lower CO₂ emissions than lead-acid batteries

6 Reliably powerful performance even with low charge status

9 High levels of safety during usage, charging and transport

Always by your side: We can help you make the switch to lithium-ion technology.



NO COMPROMISES.

Lithium-ion technology from Jungheinrich.

100% SATISFACTION
LION
technology
GUARANTEED!

Full li-ion power.
Full conversion right.

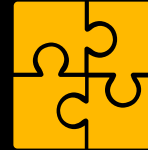
LION GUARANTEE
PLUS+

We never compromise, and neither should you!



HOLISTIC CONSULTING

Tailored lithium-ion projects encompassing everything from planning to implementation



CUTTING-EDGE TECHNOLOGIES

Unique, fully networked system comprising the lithium-ion battery, charger and truck



UNRIVALLED PERFORMANCE

Maximum efficiency with 8-year performance promise and 6-month satisfaction guarantee



COMPLETE SOLUTIONS

Everything from a single source: consulting, retrofits, rental and service

Our expertise makes us your ideal partner.

HOLISTIC CONSULTING

- ▶ More than 10 years of experience in the field of lithium-ion technology
- ▶ Over 100,000 lithium-ion batteries installed
- ▶ Tailored lithium-ion projects encompassing everything from planning to implementation by our energy experts
- ▶ Pioneering in the field of electromobility for almost 70 years

CUTTING-EDGE TECHNOLOGIES

- ▶ Powerful and high-quality lithium-ion technology
- ▶ Truck concept with integrated Li-ion battery
- ▶ Sustainable strategy for the entire Li-ion life cycle

UNRIVALLED PERFORMANCE

- ▶ Up to 8-year battery warranty with Jungheinrich Li-ion Guarantee Plus
- ▶ 6-month satisfaction guarantee

COMPLETE SOLUTIONS

- ▶ Purchase or rental solutions for our lithium-ion batteries, chargers and trucks
- ▶ Only full-service provider for Li-ion technology

Everything from a single source: Our perfectly coordinated overall system for Li-ion power.



Li-ion batteries can only unfold their **full potential** when the batteries, chargers and trucks **communicate with one another in optimum fashion**.

We are the **only full-service provider** to have developed a fully networked and **perfectly coordinated system**, which not only ensures maximum performance but also delivers significant energy savings in comparison to conventional lead-acid batteries.

Our Li-ion batteries



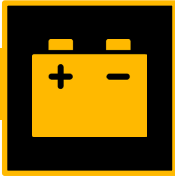
Our Li-ion batteries

OUR SERVICES



- ▶ In-house production and assembly of virtually all key components, incl. software and hardware development
- ▶ Use of the safest cell chemistry (lithium iron phosphate)
- ▶ Permanent, optimised monitoring of the Li-ion cells by the electronic battery management system (BMS)
- ▶ Short, efficiency-enhancing booster charging: 50% of nominal capacity in 30 minutes, fully charged in just 80 minutes
- ▶ CE certification

YOUR BENEFITS



- ▶ Unique, fully networked overall system from a single source
- ▶ Ecologically sound usage and maximum safety in your warehouse
- ▶ Longer battery service life due to prevention of deep discharge
- ▶ Possibility of rapid and booster charging
- ▶ Maintenance-free

Our battery chargers



Our battery chargers

OUR SERVICES



- ▶ Suitable chargers for every lithium-ion battery from Jungheinrich
- ▶ Very short charging times
- ▶ Flexible application to suit all requirements: one, two or three-shift operation as well as light or heavy-duty usage profiles
- ▶ SLH 300i high-frequency charger for all 24, 48 or 80 V applications
- ▶ Load management with peak shaving

YOUR BENEFITS



- ▶ Optimum compatibility of batter and charger
- ▶ Maximum availability of batteries and trucks
- ▶ Energy savings compared to conventional chargers
- ▶ Safe and battery-friendly charging
- ▶ Reduced energy costs due to prevention of expensive load peaks

Our trucks



Our trucks

OUR SERVICES



- ▶ Control systems developed in-house and integrated in our trucks to simplify the electrical functions (e.g. travelling, lifting, steering and battery charging)
- ▶ AC or DC control units to serve as optimum interface with the motors
- ▶ POWERLiNE trucks with integrated lithium-ion batteries
- ▶ Manufacture of POWERLiNE trucks using energy from sustainable sources (e.g. own PV systems)
- ▶ Carbon-neutral footprint of POWERLiNE series up to delivery to the customer

YOUR BENEFITS



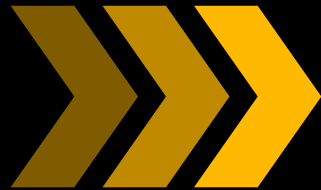
- ▶ Enhanced safety thanks to integrated fan cooling and short-circuit monitoring
- ▶ Elimination of interface problems due to perfect interplay between control unit, battery and charger
- ▶ Compact and powerful POWERLiNE trucks with optimised construction
- ▶ Greater residual capacities, optimised L₂ dimension
- ▶ Battery integrated in truck concept to deliver tangibly better ergonomics, safety and comfort
- ▶ Conscious choice for perhaps the most sustainable trucks on the market

"No other intralogistics brand in the world currently has more lithium-ion trucks in operation than Jungheinrich. We are a pioneer in the field of electromobility, a technological leader in the area of lithium-ion batteries for more than 10 years, and we regularly set new standards on the market."

Dr Lars Brzoska, Member of the Board of Management, Jungheinrich AG

Our holistic consulting

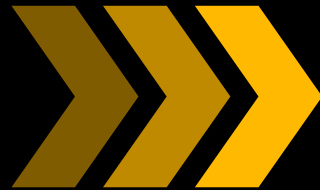
OUR SERVICES



STEP 1

IDENTIFICATION OF NEEDS

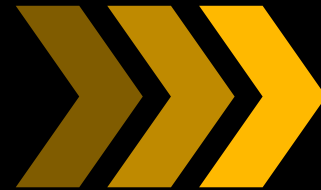
Joint definition of goals for your energy solution



STEP 2

ANALYSIS

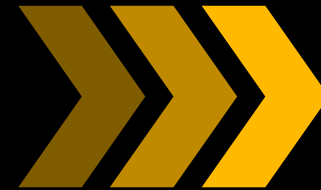
Analysis of the specific energy infrastructure



STEP 3

CONCEPT

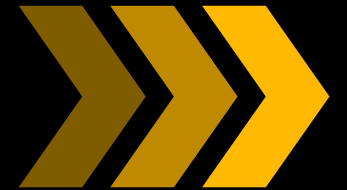
Creation of individual energy and charging concepts incl. economic efficiency calculations



STEP 4

IMPLEMENTATION

Layout planning and commissioning of your energy solution



STEP 5

OPTIMISATION

Continuous optimisation of your system

Our after sales service

OUR SERVICES



- ▶ Individual advice and assistance from our energy specialists for all your questions concerning lithium-ion technology
- ▶ Benefit from our powerSCAN service:
 1. Visual inspection of the battery
 2. Free software updates
 3. Usage report
- ▶ Benefit from our service promise:
 1. Rapid response times from our local service units
 2. 24/7 availability via the Call4Service app
 3. Global support network
 4. Qualified service engineers with special Li-ion training

YOUR BENEFITS



- ▶ Local contacts for all your questions regarding usage, application, etc.
- ▶ On-site repair of your lithium-ion battery by our energy experts with fully equipped service vehicles
- ▶ Your no. 1 contact: provision of a disposal concept even at the end of the device life cycle

Your safety is paramount.

Li-ion batteries are classed as dangerous goods according to international transport law. That is why we attribute utmost importance to the following points:

1

Ecologically sound:
Use of the safest cell chemistry – lithium iron phosphate.

2

Enclosed system:
The battery is an enclosed system with IP4 rating.

3

Official approval:
All of our batteries have passed the UN Transport Test.

4

Maximum safety:
Advanced monitoring functions thanks to our own battery management system.

5

Trained service engineers:
Reliable transport and disposal of lithium-ion batteries.

Overview of your Li-ion options

BUY

Li-ion technology for your business:
Enjoy the full benefits of Li-ion power.

YOUR BENEFITS:

- ▶ Investment efficiency thanks to three times longer service life
- ▶ Buyback guarantee for fully transparent investment
- ▶ Satisfaction guarantee and 8-year warranty

RENT

Simply rent instead of buying:
Li-ion battery and charger as a fully integrated rental solution.

YOUR BENEFITS:

- ▶ Enjoy pioneering technology
- ▶ Greater efficiency without capital commitment
- ▶ Satisfaction guarantee

RETROFIT

Simple replacement with multiple benefits:
Upgrade your fleet today.

YOUR BENEFITS:

- ▶ Enjoy pioneering technology
- ▶ Greater efficiency without capital commitment
- ▶ Satisfaction guarantee

**Count on us to make your
company fit for the future.
With uncompromising
lithium-ion solutions.**

 ***JUNGHEINRICH***