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**CURIOSITY
EMPOWERS.**

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HOW DO YOU BUILD THE **BEST** **TRUCK?**

From automated guided vehicles to hand pallet trucks, it is our aim to provide our customers with the best answer to their problems – with products and solutions from Jungheinrich. The recipe for our success is expertise, experience and innovation – all from a single source. The reason we can continually improve our trucks is because we remain curious and always work to refine proven concepts. This applies to every single technical component, from the tiniest screw and the design to the concept of the truck as a whole.

Always remembering that curiosity leads to creation.



From questions come

AN(T)

SWE

RS



It's fANTastic!

Only those who constantly ask questions can receive new answers – sometimes with astounding results. This simple principle is the backbone of our entire product development – and has made us the technological leader in the intralogistics sector.

The founder of our company, Dr Friedrich Jungheinrich, was never satisfied with the status quo. The curiosity that drove him to constantly develop his trucks further was something that he awoke and encouraged in his employees. To this day it is the engine of our new solutions, a key to our leading ability to innovate and a natural and indispensable part of the Jungheinrich identity.

Do you have that in electric? The electric mobility megatrend has been a hot topic at Jungheinrich for more than six decades. Back in the 1950s, we brought the first electric trucks onto the market, the four-wheel electric truck "Ameise 55" and the reach truck "Ameise Retrak" – "Ameise" meaning "ant" – backing a drive that had potential for the future. In those days, it was a move that could almost be called visionary. Now, almost all of Jungheinrich's trucks are electric.

Two achievements stand out in the company's more recent history. In 1996, we were the first company to fit an electric forklift truck with a three-phase motor. This truck then literally switched on turbo speed and Jungheinrich set a real milestone that has since become the industry standard. In 2011, we were the first manufacturer ever to introduce a series-produced truck with a lithium-ion battery – the forklift EJE 112i/114i – which gave us a leading role in the sector as a pioneer of drive technology.

Why set limits when anything is possible? Our knowledge is not restricted to electric drives. Jungheinrich's holistic energy expertise spans everything from the truck and battery to the battery charger. We develop and connect all components, with a clear focus on lithium-ion technology, to create complete solutions. The advantage for our customers is that they receive a perfectly coordinated system from a single source that offers maximum energy efficiency.

Can a reach truck be a revolution? The ETV 216i certainly is. It is the first truck of its kind to feature a permanently fitted lithium-ion battery. And this has changed the truck's entire concept.

Everything that was standard until now and therefore fixed was questioned when we developed our newest reach truck, and the full potential of lithium-ion technology was tapped in entirely new ways. The result was a truck without compromise – with significantly more room for improved ergonomics and numerous possibilities for optimised performance in the warehouse.

We noticed we had roused our customers' interest in the development stage. We worked with selected partners from the very beginning, and they provided valuable feedback in workshops and during field tests. Following its world premiere at the leading trade show LogiMAT in March 2018, the ETV 216i is now finding its way into our customers' warehouses. We have secured many orders since its release. One logistics company, for instance, ordered 19 trucks for a car factory in Mexico. For us, the ETV 216i represents just the start of a whole new generation of trucks – and the next innovation is always just around the corner.



COMPLETELY REDEFINED –

the **ERC 216zi**



1,500 kg falling from above –
and still safe. Curious?

Find out more: youtube.com/JungheinrichAG



Always a fork ahead of the industry – that's Jungheinrich. After we were able to set another milestone with the ETV 216i for electric reach trucks, we transferred the intelligent design concept based on lithium-ion technology to the electric stacker truck ERC 216zi – and added improved functions and equipment to the new truck:

Maximum performance

- 1 The **no-maintenance lithium-ion battery** is permanently fitted in the truck. The result is markedly more compact dimensions compared with similar trucks. This makes the ERC 216zi extremely manoeuvrable. The new battery technology enables extremely long deployment times with optimal energy efficiency.
- 2 The **new mast** provides the ERC 216zi with a higher residual capacity of at least 100 kg.

Increased comfort for the operator

- 3 The **newly designed operating element smartPILOT** is the first system to offer intuitive one-hand steering for all driving and lifting functions.
- 4 An **easily accessible charging interface** allows rapid intermediate charging.
- 5 A **large, clear display** shows all important truck information.

Protection on all fronts

- 6 New **platform concept with protection on three sides**: solid side walls to ensure maximum safety and comfortable driving.
- 7 The **panorama window in the driver's cab** protects the driver from falling objects while offering an optimal view.
- 8 A variety of **assistance systems with warning and signal functions** increase safety.



PRODUCTS AS BRAND AMBASSADORS

Every day, 18,000 employees work to ensure that the brand name Jungheinrich is recognised as one of the world's leading intralogistics companies. It takes more than just images and copy to create a strong brand; it takes unmistakable products and solutions. The visual impression is as important as the technical performance. Two people who have known every Jungheinrich truck from inception are product designers Michael Niebuhr and Till Muhl. They explain why the visual impression is so important.

How do ideas become finished trucks at Jungheinrich?

MN: We call this process PCP, which stands for product creation process. It starts in a workshop that directly includes all relevant areas, such as construction, sales, marketing and design. By including all stakeholders from the earliest stages, we can take every important aspect into consideration right from the beginning. This close collaboration continues until the final product is ready.

Does that mean the technology and design are created at the same time?

TM: Exactly, we consider them one unit. What should the truck offer our customers? And how can these qualities be supported and made visible through the design? These are the questions we collect during the creation process. Customer benefit, ergonomics, safety, functionality, value – these are all important factors in the design.

MN: Design is more than just styling and optics for us. We see the products as brand ambassadors. The design is not an end in itself; it helps people to visualise the numerous innovative Jungheinrich product characteristics and the expertise that is in each truck.

Could you name an example?

TM: A few years ago, we began equipping several models with lights or reflectors. This is a design feature that is first and foremost a safety function, but has also

become a symbol of the brand. The lights give the truck a "Jungheinrich face", which has now become a distinct feature of our trucks.

MN: Or our JetPILOT. We completely overhauled the steering wheel and developed a multifunctional steering wheel that has all the important functions of the material handling equipment integrated into it. User-friendly, ergonomic and intuitive. The reward for this integrative design process was winning the reddot design award. And sometimes we go for Gold for the entire design of the truck – as we did for the ETV 216i which received the German Brand Award 2019.

How important is curiosity in your work?

MN: Without it our work would not be successful. Our work is particularly fun when we manage to inspire others. Giving them an "aha!" moment when they realise innovation never stops.

TM: And you don't have to turn everything inside out to achieve this. Sometimes small adjustments in the design can have a big impact in terms of improving the benefits to the customer – and this is what counts in the end.



Lithium-ion technology:

- ▶ high performance
- ▶ fast charging times
- ▶ no maintenance

Number of trucks with lithium-ion batteries sold

LI-ION
technology

