



Stacking
Up Experience –
**30 Years of Working
Together with Linde
Material Handling**

_____ For more than 30 years, Linde Material Handling and Porsche Engineering have cooperated on projects such as the product design of Linde industrial trucks. Fritz Müller, former key account manager at Porsche Engineering, oversaw this cooperation over a period of many years, always in close contact with Udo Herrmann, head of pre-development at Linde Material Handling. To get more detailed insight into this long-term collaboration, we requested an interview with these two gentlemen.

Interview by Frederic Damköhler and Nadine Guhl Photos by Jörg Eberl



Mr. Herrmann, what challenges will the industrial truck and commercial vehicle sectors be facing in the near future?

Herrmann: The challenges for our sector mainly result from the different demands of the markets. Linde's aim is to be a continuous presence in the various market segments all over the world. The biggest challenge here is to meet all of the specific requirements of each market. In low-cost markets, the main considerations are functionality and reduction in costs, while in the high-end market segments, aspects such as performance, design, and ergonomics are critical as well. The challenge is to provide a range of products that meet the standards at Linde while also, of course, fulfilling the expectations of our customers.


To what extent can developers provide support here? Where do they encounter limitations?

Herrmann: At this point, let's take a look at Porsche Engineering. Overall, we're very eager to rely on the experience and momentum from the automotive sector. Just like cars, forklifts usually have four wheels. But this is only one of many similarities: Porsche Engineering and Linde are both positioned internationally, with customers all around the world, and this is very important with regard to the market segments we have mentioned. We have benefited >

Udo Herrmann

Prior to joining Linde Material Handling in 1992, Udo Herrmann, a trained auto mechanic, availed himself of the 'second-chance education' option to study mechanical engineering at Darmstadt University of Applied Sciences. After working in the design department for crankshaft grinding machines at Naxos-Union, Udo Herrmann moved to Linde Material Handling. There he held a number of positions in development and design, including that of department and project leader. Since 2005 Udo Herrmann has been the head of pre-development for vehicles.

“What is special about Linde is the combination of a high-performance investment commodity and the highly emotional brand. Passion and pride of ownership are seen as the core components of the brands: a philosophy we share with Porsche.”

 *Dr. Ralf Dingeldein, New Vehicles Sales Manager
at Linde Material Handling*

enormously from our cooperation, and, over a short period of time, have been able to incorporate significant developments in the automotive sector into our own industry. This cooperation encompasses the most diverse areas, from styling and IT integration to matters relating to electronics or engines. There are limitations to our cooperation, inasmuch as cost-intensive technological aspects are very difficult to transfer to low-cost markets, where the aim is to keep manufacturing costs as low as possible. Recently, we have been witnessing a certain widening of the gap between the passenger car and forklift sectors. A forklift remains a work machine, while a passenger car is viewed in more emotional terms. Therefore, some topics from the automotive sector cannot be applied to industrial trucks to the same extent.

Mr. Müller, can you remember your first project in cooperation with Linde Material Handling?

Müller: My first project with Linde Material Handling was the second generation of the H30 – BR393. However, our cooperation goes back even further. The very first cooperation project was the H30 – BR351: a styling project whose aim was to transform a pure work machine into a vehicle with a more pleasing appearance. Since the beginning of the project in 1982, there has been a framework contract between our two companies that is still in force today.

Over this extended period, did you also encounter difficulties in working together? How were they solved?

Herrmann: Readjusting to completely new product generations, such as the 39X, is never easy. This type of process requires considerable patience, endurance, and sensitivity on the part of everyone involved in the cooperation. Continuous effort is necessary, especially in view of the differences between cars and industrial trucks.

Müller: As an engineering services provider, we have to be able to understand and meet our customers' needs and wishes at all times. And although this is part of our day-to-day work, it continually presents us with new situations and challenges. This calls for trusting communication with one another, which of course requires a measure of sensitivity as well as openness. Only then can we complete projects together successfully.



A success factor for long-term customer relationships: open and trusting communication is writ large in all customer projects

How do Linde industrial trucks and Porsche go together?

Herrmann: Analogous to the performance of a Porsche on the road, our forklifts are also high-performance vehicles that move loads quickly—and above all, safely—from one place to another. In addition, Linde and Porsche share high quality standards and a unique product design. As with Porsche, the special design of our vehicles triggers emotions and reflects the values of our company. The vehicle's high performance must be clearly visible; the high quality, sturdiness, and solidity must be given clear expression. Just as is true of Porsche, we do not add artistic touches without substance.

What is particularly special about the long-term customer relationship between Linde Material Handling and Porsche Engineering?

Müller: What's very special is the great mutual trust that has developed over the years. In particular, I appreciate how we've come to work together as though we were colleagues in the same company. Our relationship is not static—we're always learning new things, and contacts change over time, but the high level of trust remains.

Herrmann: In this relationship, we've no inhibitions about bringing up tricky subjects. Even when difficulties or problems arise, they're discussed openly and jointly. >

“We have benefited enormously from our cooperation with Porsche Engineering, and, over a short period of time, have been able to incorporate significant developments in the automotive sector into our own industry.” Udo Herrmann



Müller: We've always worked together through personal, direct channels between the departments involved—without any other parties acting as intermediaries. This direct link ensures that both sides always know whom they're dealing with, and who their immediate contact person is.

What kind of momentum do you anticipate in the future for Linde Material Handling thanks to your collaboration with Porsche Engineering?

Herrmann: In particular, I hope that we will continue to benefit from an impetus for trends and technical topics from the automotive sector that can be transferred to our industry. I'm thinking of topics such as increasing electrification, communication tools, and displays; these are all becoming more and more important for industrial trucks. This is an area in which the automotive sector is usually a generation ahead. And design language, namely, styling, will continue to play an important role.

Mr. Herrmann, if you could be a developer at Porsche Engineering for a day, what would you like to develop?

Herrmann: One day isn't very long, I'm afraid—a bit limiting, of course ... But I'd really like to try my hand at developing an engine. As a trained mechanic, I've already worked at VW, Audi, and Porsche, so I've got a strong personal relationship with the automotive industry. The engine is the heart of every vehicle, and the sound and performance of a Porsche 911 gives me goose bumps. ■

30 YEARS OF COOPERATION BETWEEN LINDE MATERIAL HANDLING AND PORSCHE ENGINEERING

In the early 1980s, after Porsche had already designed slewing gear drives and chain drives for Linde, the sports car manufacturer was commissioned to design a new generation of forklifts. Since then, the topic of styling has been an important aspect of their collaboration. By now, Porsche styling for Linde has become a multiple award-winning trademark. For example, once again Linde forklifts have been awarded the "red dot award for product design" by the renowned Design Zentrum Nordrhein-Westfalen: the E20—E50 battery-powered counterbalance forklifts received this award in 2011, adding it to more than 20 design awards since the start of this cooperation.

911 CARRERA MODELS: Fuel consumption combined 11.7–8.2 l/100 km; CO₂ emissions 275–194 g/km