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KRONE

HEAVY LIFTING

TOUGH COMPETITION IN THE TRAILER MARKET

Krone, a German company specializing in commercial trailers, provides customized solutions to transport companies. To successfully withstand price wars, it pursues a consistent efficiency program—and not only in production.

📷 SVEN HEITKAMP



PHOTO_KRONE

Steel skeletons spanning 25 square meters float across the factory hall on a fully automated overhead conveyor system—these are unpainted chassis platforms on their way to the blasting, electrophoretic deposition, and powder-coating stations. Not far away, Hannes Hansen uses a heavy yellow pneumatic screwdriver to tighten the bolts on wheel hubs with the exact level of torque. Ten bolts are needed to secure these wheels, which are one meter in diameter. Clacking and hissing sounds rise from the assembly line before the semi-finished platform rolls on to the next work station.

Hansen's colleagues will soon be mounting components marked with a simple blue symbol—a stylized crown, the insignia of the family-owned Bernard Krone company. One of Europe's largest trailer manufacturers, it is headquartered in Emsland, a flat and sparsely populated region in northwestern Germany. It currently manufactures 27,000 semi-trailers, trailers, and container chassis a year, or around 120 a day. "We produce 1,500 meters of semi-trailer every day," remarks company head Bernard Krone.

Krone's trailers are on the roads in many parts of the world. The Krone Group has member companies throughout Europe as well as in Morocco and Algeria, sales offices in the United Kingdom, France, the Netherlands, Russia, Hungary, and Kazakhstan, and plants in Denmark and Turkey. Only about a third of its commercial trailers

are sold in Germany, with the other two-thirds sold primarily in Scandinavia, Central Europe, and Eastern Europe. A growing level of activity abroad is helping the vehicle maker deal with ever shorter market cycles. Although business declined significantly in 2010, the Krone Group recently posted revenues of 1.4 billion euros—nearly a record. "There's always a market somewhere that's doing better," says the 35-year-old CEO, who took over the company in 2010 from his father, Dr. Bernard Krone.

Commercial trailers account for the lion's share of the Krone Group's revenues, or 880 million euros, although high-grade agricultural machines such as harvesters, forage wagons, and balers are produced and sold worldwide as well. In contrast to the forty-ton trucks that barrel down the highway at constant speeds, however, this medium-sized company is buffeted by frequent fluctuations on the market. Swings in the overall economic situation hit not only freight transport, but also the suppliers of transport companies, chief among them the vehicle makers. "When the market slows down we notice it immediately," says Krone. "First in used vehicles, then in replacement parts, and finally in new vehicles—all within a matter of weeks." Conditions have become tougher, markets are more volatile, and customers are placing very high demands. Price wars in the global transport and logistics business are brutal, fuel prices and taxes are rising, and profit margins are narrowing. "Prices are being cut close to the bone," laments Krone. "Many transport companies are not earning nearly as much as they actually should. In Europe, logistics are unfortunately not viewed as added value, but rather as a necessary evil."

As a result, a fierce struggle to eliminate competitors has been waged in the commercial vehicle sector too. Only one other major provider and a few regional companies have survived the latest crises, according to Krone. And his company. A maker of premium trailers, it has withstood the pressure on prices by representing the highest quality and safety, the lowest lifecycle costs, and creativity in meeting a myriad of customer needs, if necessary with its own innovations. "We employ a modular system in our production, and use a vast array of standard components to supply all manner of customized products—depending on load types, driving requirements, and industry needs," says Krone.

To hold its own on the market and to keep its production sites running, the company has supported or acquired distressed suppliers and customers. A major key to its success has been the large-scale customers who order more than 2,000 trailers a year. "We are the preferred supplier for large fleets that replace their vehicles on a continuous basis," reports Krone. Of the company's 2,000 active customers, the top 20 account for one-third of sales. They lay a stable foundation in a shaky market.

A low vertical range of manufacture of around 15 percent has proven to be a blessing. It means that Krone can provide advance warning to its suppliers of drops in demand. "The risk of market fluctuations is spread across many shoulders," says Krone. The company also has an intelligent personnel management system with work →



PHOTO_CHRISTOPH BAUER

High flyers: after the electrophoretic deposition station, the steel semi-trailer chassis are laid with cables for their individual superstructures.

FROM HORSESHOES TO “MEGA LINERS”

The history of the Krone Group is a success story spanning four generations of an enterprising family. In 1906 Bernhard Krone started his company at a blacksmith's shop and yard he inherited in the country village of Spelle in the Emsland region. Since then Bernhard's son, grandson, and great-grandson—all named Bernard—have expanded the small shop into a growing and globally active group of companies producing agricultural machinery and commercial trailers. And the story continues.

Company director “Bernard IV,” who grew up with two older sisters, took over the company in 2010 at the age of 32. As his father said at the time, “Now it's your turn.” Bernard Senior continues to consult on general matters as part of the advisory board, but stays out of day-to-day operations. “We wanted to be clear about roles,” says the current company head. He never viewed the heavy responsibility as a burden, and in fact started preparing for the job as a child.

The Krone family maintains its traditions. Large busts of the founder stand outside company headquarters in Spelle and Werlte, and portraits of past generations hang in the administrative offices. The family is firmly anchored in the region, with both Werlte and Spelle long ago naming streets after Bernard Krone.



PHOTO: CHRISTOPH BAUER

Strong foundation: Company director Bernard Krone builds on the legacy of his great-grandfather Bernhard—shown here in his blacksmith's overalls. This statue greets visitors to the company site in Werlte.

CUTTING PURCHASING COSTS

As Krone's example shows, material costs can have a big effect on the bottom line.

Base frame, chassis, superstructure: Krone uses what amounts to an enormous modular system to make its truck trailers and semi-trailers. The different types of trailers are assembled piece by piece from a store of around 20,000 different components. Finished steel base frames 13 meters in length are first furnished with cables and air hoses, then with axles, chassis platforms, and brakes, and finally with posts, plug-in systems, fronts, boxes, collision guards, ladders, tailgates, and tarps. Some 1,200 metric tons of materials are used every day, from a total of 530 suppliers.

Makers of commercial vehicles have seen their profits squeezed over recent years due to market conditions in Europe—even though their turnovers have risen. The first thing Porsche Consulting did, therefore, was to analyze the components of the enormous modular system in order to identify superfluous production costs and ultimately to optimize purchasing. “We surmised that here is where Krone could achieve the best results,” says Principal Andreas Baier, “because it uses a very high volume of materials and has a vertical range of manufacture of only about 15 percent.” The aim was to reduce the share of material costs from 89 to 83 percent. And already in the first year the company was able to cut costs in the double-digit million range by analyzing the value of its modules, creating new product designs, holding intensive supplier workshops, consolidating its products on offer, and internationalizing procurement.

A thorough analysis quickly revealed that some standard components were of unnecessarily high value, such as paint on invisible locations, sheet steel of excessive thickness, sealings of little use, and front walls polished manually to perfection in places where no one would see them. Unneeded effort, in other words, that generated unnecessary costs. Porsche Consulting also calculated the actual costs of various components from suppliers—enabling it to identify cost pushers and potential savings. With this as a basis, individual contracts could be revised. Demand and capacity management was improved, product groups further consolidated, purchasing processes optimized, and the purchasing department coached. Plans also call for considerably expanding procurement outside Europe in the future, particularly in Asia. Krone has now hired its own value analysis experts, who keep a constant eye on cost trajectories.

And they didn't stop there. Porsche Consulting also looked at how orders are processed and how the design & development and sales departments are organized. By tightening the

chain of communications among customers, sales reps, and production, they increased delivery reliability to well above 90 percent. These are all efficient projects of short duration that help Krone help itself, while giving the company time to put changes systematically into practice and allow the effects to unfold.

“Site analyses like these are important,” says Bernard Krone. “When you look at the processes with someone from outside, all of a sudden you start noticing things.” The employees are also appreciative, because they were involved in the developments and have been able to contribute their own ideas. A modular strategy will now be developed for Krone's new “Liner 5” generation. And by skillfully managing variants (see page 28) the company is expected to fulfill individual customer wishes even better—solely on the basis of an optimized modular system.

**KRONE
IN FIGURES**

The Krone Group comprises the Werlte vehicle plant as well as agricultural machinery and agricultural trade and services. Its headquarters are in Spelle, with additional production sites in Herzlake and Lübtheen as well as in Hvam, Denmark and Tire, Turkey.

Group revenue in the 2011/2012 business year: 1.39 billion euros, including 878 million euros from the vehicle plant

Group export share: 66.6 percent

Annual commercial trailer production: 27,000 vehicles, about 70 percent of which are “Profi Liners” and “Mega Liners”

Number of employees: 2,055, including 900 at the vehicle plant

Commercial trailer sales markets: Germany (34%), Scandinavia (23%), Central Europe (22%), and Eastern Europe (21%)

accounts, flexible production times, and its own temp company that can operate without profit. As a result, there are rarely layoffs at Krone. This family-run company with more than a hundred years of history in a region with relatively little infrastructure simply bears too much responsibility for the community. “Before we send people home,” says Krone, “we run down our work accounts, cut hours, and cancel shifts. I live in a rural part of the country. I don’t want anyone beating down the door.”

Krone’s bestsellers include the “Profi Liner,” a versatile all-round talent that usually has tarps on the sides and roof, and the “Mega Liner” with an extra-flat chassis and an interior height of three meters. A favorite of the automotive industry, each “Mega Liner” can hold three stacked wire-mesh pallets full of components for passenger car production. The company also offers many industry-specific models such as the specially reinforced “Paper Liner” for paper rolls that weigh tons, and the “Cool Liner” with refrigerated compartments for perishable foods or pharmaceuticals. Plus container chassis and many other products as well. Costing around 23,000 euros, a “Profi Liner” will travel an average of three million kilometers over 15 to 20 years of use.

Krone installs whatever equipment and features the customer would like, including corporate designs. It also configures chassis to meet customer requirements. “If a truck travels 200,000 kilometers a year, the customer will order superior-grade axles and tires. If most of its

mileage comes from piggy-backing on rail cars, then standard features will suffice,” says Krone. If customers are not satisfied with the components on the market, Krone will work together with suppliers to develop special versions, such as ever more crucial telematic solutions, freight safety accessories like the “Multi Safe System,” and roof models such as “Ice-Protect,” which can hold heavy layers of snow.

This makes the company a technological trailblazer in the industry. “Many customers ask for components that run under our name,” says Krone. “Which is how we acquired an axle maker, for example.” To reduce production costs, the company is seeking to further standardize its modular system so it can offer customized solutions without having to build them from scratch each time. The director is also considering whether to pursue a strategy of broadening the company’s activities and assembling more products locally in individual markets. “We’ve got still more potential,” he observes.

Experts at Krone have recently provided impressive proof of this by working together with MAN to perfect semi-trailer aerodynamics, incorporating research on the contours of pilot whales (see page 43). The “Aero Liner/Concept S” consumes up to 25 percent less fuel, and a drivable prototype is on display in the MAN showroom in Munich. It’s still unclear when the “Aero Liner” will hit the roads. To offer the same load volume as conventional vehicles, it would have to be a good two meters longer than the length approved thus far. But Krone is known for coming up with solutions. ←



PHOTO CHRISTOPH BAUER

While a crane lifts pre-built axles into the assembly jig, a chorus of pneumatic screwdrivers provides the usual acoustics at Krone.