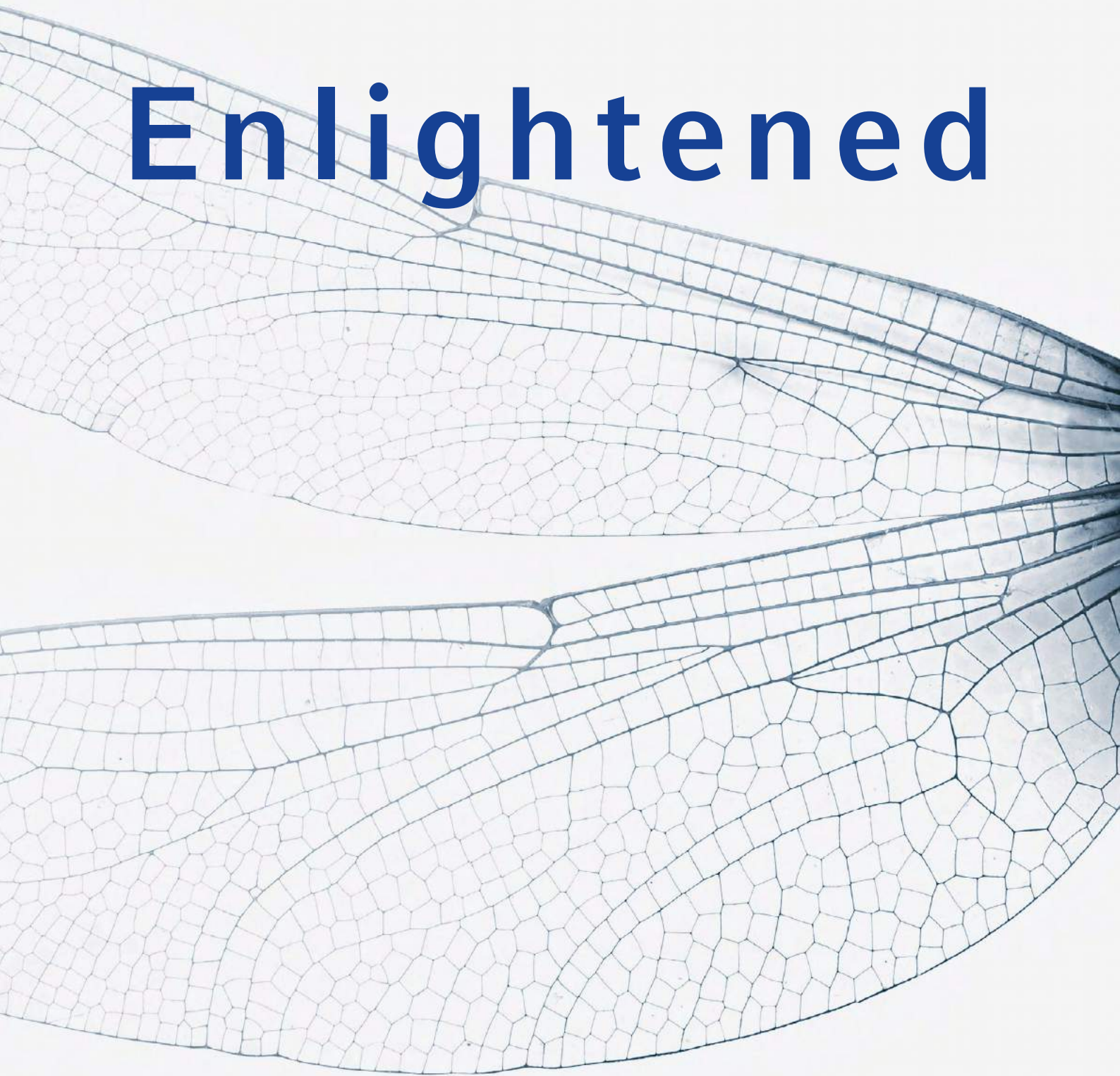
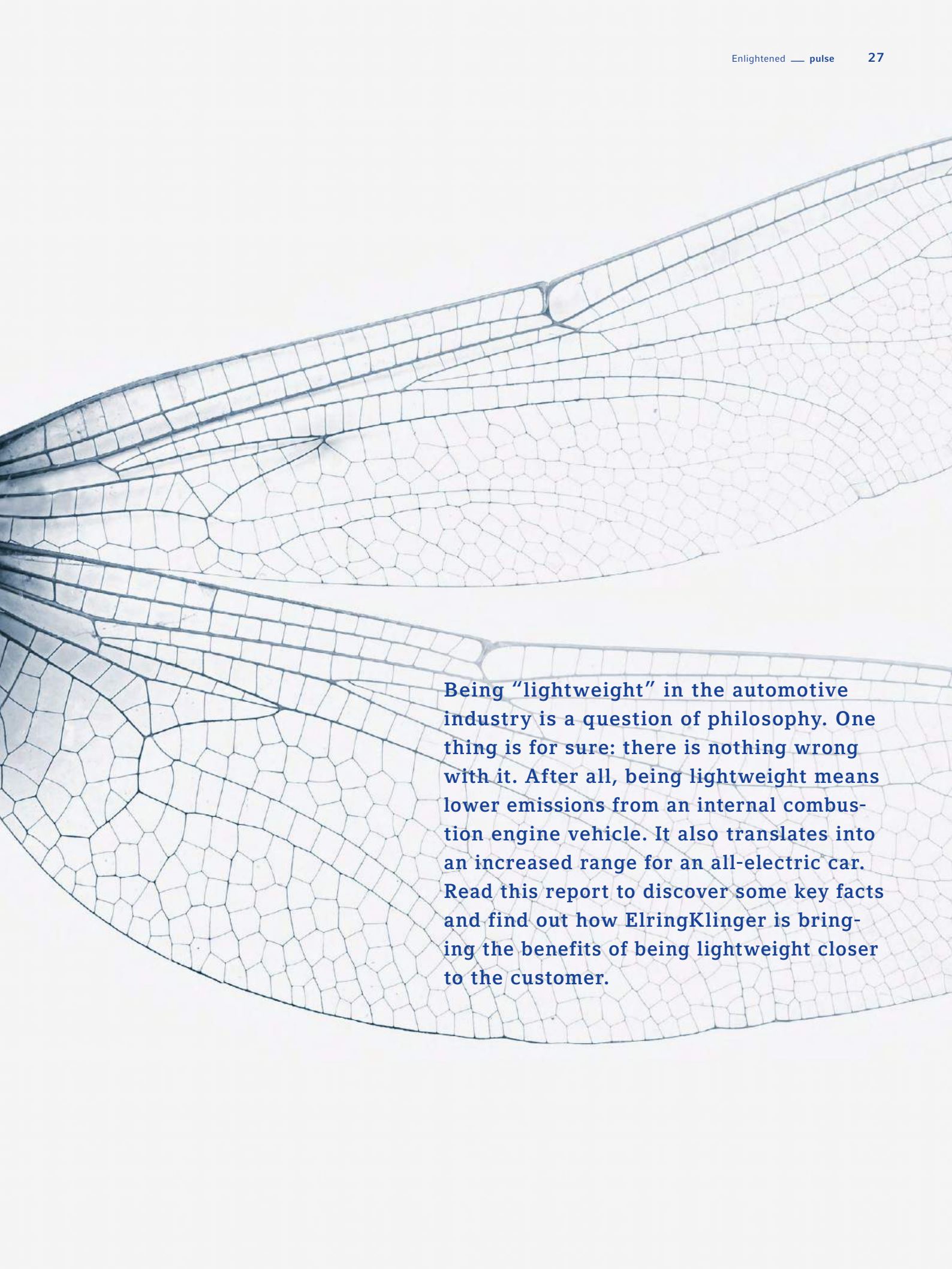


Enlightened





Being “lightweight” in the automotive industry is a question of philosophy. One thing is for sure: there is nothing wrong with it. After all, being lightweight means lower emissions from an internal combustion engine vehicle. It also translates into an increased range for an all-electric car. Read this report to discover some key facts and find out how ElringKlinger is bringing the benefits of being lightweight closer to the customer.

Lightweighting is particularly popular among customers. This applies equally to established producers and to new market players, such as those in California. ElringKlinger has built up significant expertise in this area and is also successful marketing its lightweight products among its customers on the ground, as several high-volume orders demonstrate.



ElringKlinger's Simon Knoll is working the US West Coast.

When Simon Knoll makes his way to his office in the morning, the sun is only just beginning to rise over the summits of Mission Peak. Life here in Fremont on San Francisco Bay has a lot to be said for it, and the mountains of the nature reserve in the eastern section of the city are as much a part of that as the ocean to the west. But Knoll only ever has time to admire them in the evenings and on weekends. Right from the early hours of the morning, his attention is focused solely on his sales activities. After all, his colleagues back in his native Germany have already been up and about for several hours and have left him a brimming inbox, as usual. The time difference is nine hours.

As ElringKlinger's man on the ground, Simon Knoll is responsible for reaching out to the numerous next-generation car makers gradually setting up shop here in California. Many of them have names that are not as familiar – even to industry insiders – as those of the traditional manufacturers or the top dogs among the providers of electric vehicles.

The existing and potential customers with whom Knoll is cultivating relationships also include those who, rather than focusing solely on electric drives, are already busy integrating autonomous driving and connectivity into the models they are developing. This is enabling them to complete the whole “triple jump” facing the automotive industry all in one go. First, the car of the future will be emission-neutral; second, the driver will no longer actually be doing the driving, or at least not all of the time; and third, the vehicle will be permanently online to optimize traffic control and onboard entertainment for the people inside. Impossible? Not for the visionaries of Silicon Valley.

“You really sense a different mentality here – full of pioneering spirit, openness, and enthusiasm,” Simon Knoll says. “Development cycles are much shorter than used to be the case in the industry. Rather than everything hinging on whether or not something is possible, it's only ever a question of ‘how.’” Knoll knows what he is talking about. He cultivates close links with his new customers, because long-term business relationships with the “new players” are as much a part of ElringKlinger's philosophy as a trust-based working relationship with the traditional providers.

Developing and strengthening new global contacts is the main job of the sales team led by Günther Fermenta, who manages relations with these “new player” customers from his base in Germany. He makes best use of his global sales experience with the Big Three from Detroit as well as his many years spent working in Asia to introduce this new clientele to the whole of ElringKlinger's product range. This sees him make regular trips to Silicon Valley, where he joins Simon Knoll to hold meetings with customers. “And lightweighting is an unquestionably important issue, because the new players know precisely what benefits they can get from having less weight and more functionality,” Fermenta says. “And then there's the fact that the hierarchies are flat and the decision-making channels are short. This means everything happens much faster – in development, in the order-to-market phase, or in integrating innovations, such as autonomous driving. Many new providers are emerging, bringing us many new areas of application.”

Fermenta and his team have already convinced a major US manufacturer of the benefits of ElringKlinger's lightweight structural components. The order is worth more than hundred million euros and series production is now underway. The Group has already

67%

of those asked in a VDI study believe that the kinds of fiber-reinforced composites that ElringKlinger offers harbor the greatest potential for growth in series production – well ahead of magnesium (19 %) and aluminum (14 %).

SIMON KNOLL**KEY ACCOUNT MANAGER NEW OE**

After writing his Master's thesis on battery modules, the engineer and business administration graduate devoted his attention to lightweighting, another hot topic for the future at ElringKlinger. He has been the company's local sales representative for the new automotive manufacturers on the US West Coast since 2016.

GÜNTHER FERMENTA**DIRECTOR SALES GLOBAL ACCOUNT NEW OE**

The sales professional has worked in the automotive supply industry for an impressive 30 years, a full 26 of them at ElringKlinger. A graduate in business administration, he spent a total of ten years as Director of Sales for the key accounts of General Motors and FiatChrysler plus 14 years as Regional Director in Asia. Business involving the new automotive manufacturers is being expanded across the world under his leadership.

PHILIPP RUEZ**GLOBAL BUSINESS DEVELOPMENT MANAGER LIGHTWEIGHTING**

Holder of a degree in business administration as well as an MBA, he joined ElringKlinger when it acquired the toolmaker Hummel-Formen GmbH. Together with the Lightweighting/Elastomer Technology division, he develops new product ideas in the structural lightweighting segment and assesses them for marketability.



Philipp Ruez is expanding ElringKlinger's portfolio of structural lightweighting products.



Günther Fermenta heads up the sales team for the new automotive manufacturers.

won its next large-scale order, too. "We are in advanced negotiations with other manufacturers as well. Our list of development projects is a long one," Fermenta adds. "More orders will follow on the back of that."

When it comes to analyzing their customers' needs and providing solutions that are relevant to them, the two men receive support from the Group's headquarters in Dettingen/Erms, the base for Philipp Ruez, who acts as the "nerve center" for sales related to lightweighting. He is responsible for pooling customer requirements, developing new product ideas, and assessing them for marketability. Ruez firmly believes that more applications will emerge in addition to the Group's first batch of structural lightweight components – its cockpit cross-car beam, front-end carrier, and door module carrier. "In the next few years, our sales activities will focus on marketing the structural components that we've already launched. However, we've still got many more ideas on how we can use our unique technologies in lightweighting in ways that make sense and benefit the customer," Ruez explains.

ElringKlinger's USP for structural components is its combination of production process and material expertise that enables a basic material to be reshaped and plastic injection-molded onto a component in a single production step. "This highly innovative technique gives the customer three advantages over their conventional options: they can save weight, and the structural component can hold more features. Something that doesn't require an extra process step, incidentally," Ruez stresses. "And, last but not least, our products are usually fully recyclable."

So, could he reveal one of the new ideas to us, we ask him. Ruez, however, is reticent: "I don't want to give too much away," the business development manager says. "But you'll find structures that lend themselves to lightweighting in a vehicle's body frame as well as in its interior or trunk. And you don't have to stop at the automotive industry either." He feels sure that there is still great potential for arousing customer interest, because lightweighting allows energy to be used efficiently. After all, being lightweight is a question of philosophy.

Lightweighting is one of ElringKlinger's strategic areas of business. While lightweight engine components have been part of its product portfolio for nearly 20 years, the Group has grown its expertise to include lightweight structural components as well in the past five years or so. Further revenue growth is expected in this area over the next few years.



The Group brings its extensive materials, process, and manufacturing expertise to bear with lightweighting solutions for bodywork. This innovative series of polymer/metal hybrid products also includes the front-end carrier, which is already in series production.



OIL PANS

ElringKlinger's range of lightweight products also includes engine components such as oil pans.



OVER

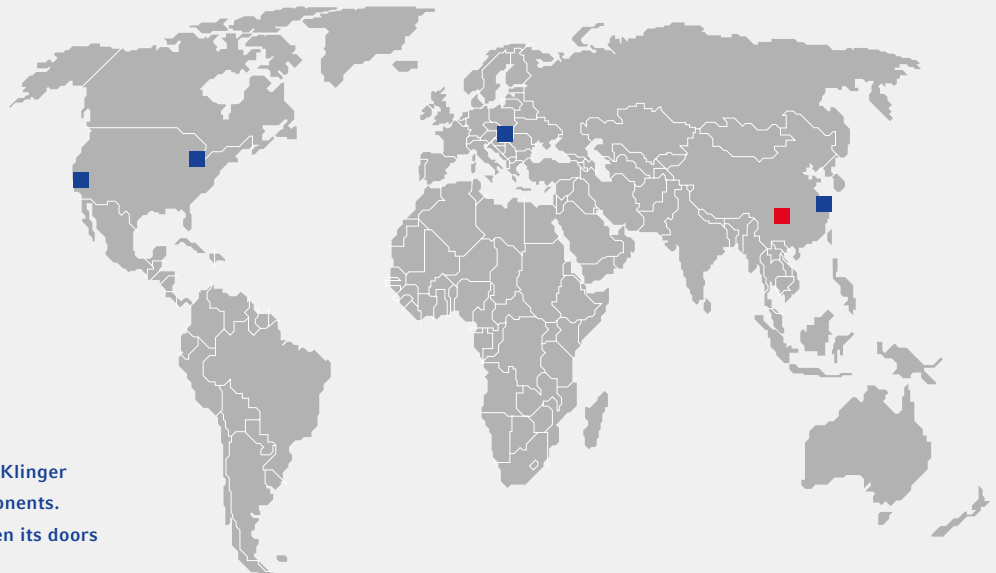
€100 million

in revenue will be generated by 2024 from an order for door module carriers made from so-called organo sheets. Besides saving on weight, these also allow more features to be integrated.

THERE ARE NOW

4

sites around the world at which ElringKlinger produces lightweight structural components. The fifth, Chongqing in China, will open its doors in 2018.



UP TO



40%

in weight savings can be achieved by a hybrid cockpit cross-car beam from ElringKlinger.

No.1

in the commercial vehicle segment: ElringKlinger is the world leader in polyamide oil pans. These pans weigh between 30 % and 50 % less than deep-drawn steel pans and die-cast aluminum ones.

10 million

CYLINDER-HEAD COVERS
ROLL OFF ELRINGKLINGER'S
GLOBAL PRODUCTION LINES
EVERY YEAR.



Nothing can happen without tools: Hummel-Formen has been part of the ElringKlinger Group since 2011. The toolmaker for injection molds facilitates the creation of complex geometries and thus is instrumental in enabling hybrid products such as cockpit cross-car beams and door module carriers to be made.

Revenue share of Hummel-Formen tools sold for

