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Full steam ahead

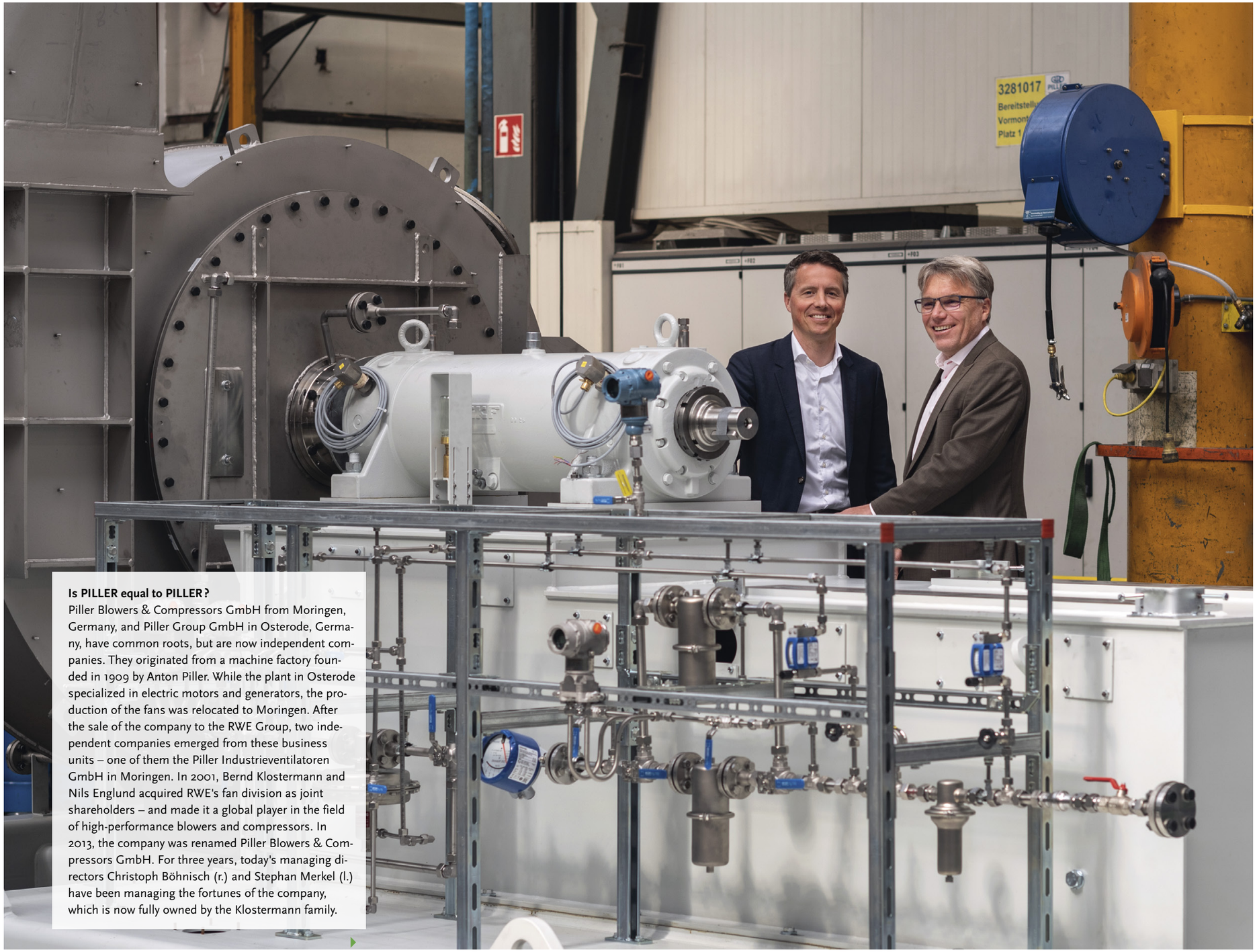
Piller Blowers & Compressors is a hidden champion that builds high-performance blowers and compressors as a global technology leader. In order to expand this top position, the German based company is working on further increasing customer benefits with targeted digitization.

TEXT **TOBIAS KINTZEL** PHOTO **ALCIRO THEODORO DA SILVA**

READING TIME: 10 MINUTES

In the production of many, seemingly simple products that pass through our hands every day, a lot of steps are necessary. For some – rather unexpected – a company from southern Lower Saxony in Germany is involved: When it comes to tomato paste, paper, coffee powder, the after-work beer or the salt in the soup, for example, machines from Piller Blowers & Compressors are used in the production processes. But they are also used in industrial wastewater processes. In short, the high-performance blowers and compressors from Moringen, Germany, are used in various industries when it comes to separating or drying solid and liquid substances – for example, turning milk into milk powder. The aim is to recover the hot vapor used in the manufacturing process, by compressing it with the blowers and compressors, thus lifting it to a higher temperature, and ultimately making it available again in the process. "We do not manufacture standard products, but individual pieces that are specifically fitted into our customers' production facilities," says Christoph Böhnisch, explaining the formula for success of the company, which he has been running together with Stephan Merkel as CEOs for three years now. With this technology, PILLER became market leader – worldwide. Around the globe, there is hardly a country that has not yet been supplied. The export ratio is more than 85 percent.

PILLER has continuously improved its machines over the years: This is reflected in a significant increase in energy efficiency, while at the same time minimizing wear and tear of the material. What initially does not sound very exciting to the non-expert turns out to be a technology with spectacular effects for customers: PILLER machines ensure stable conditions in the production process and thus consistent quality in the end products. But above all, they reduce the use of energy in production processes, sometimes drastically.



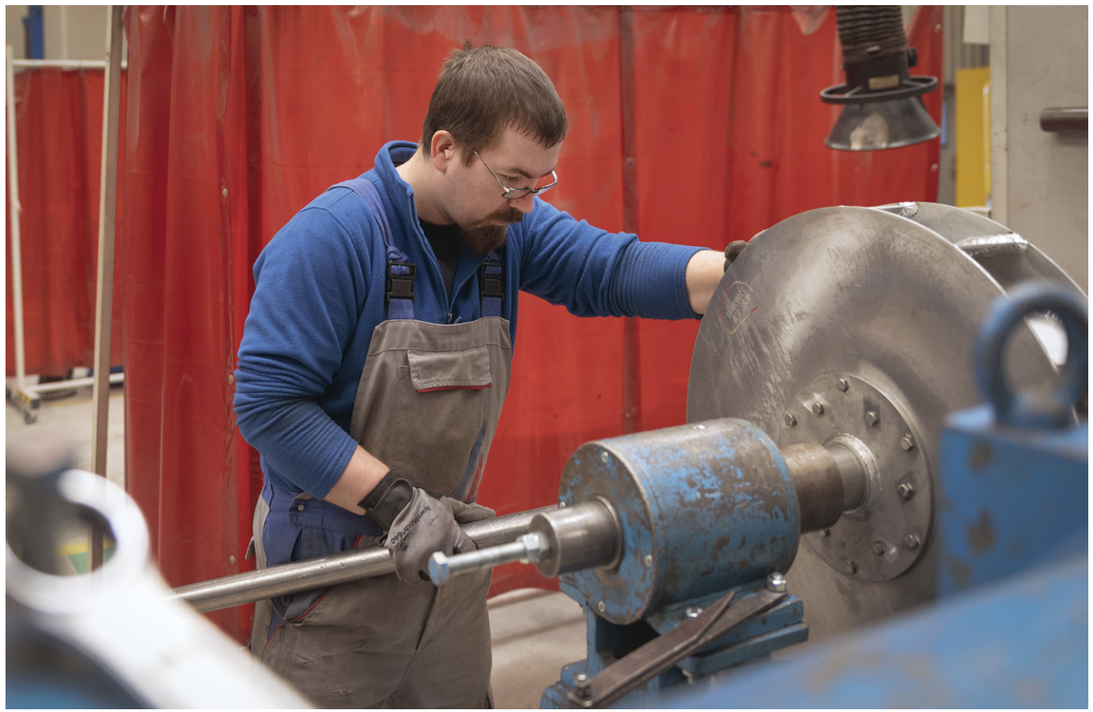
Is PILLER equal to PILLER?
Piller Blowers & Compressors GmbH from Moringen, Germany, and Piller Group GmbH in Osterode, Germany, have common roots, but are now independent companies. They originated from a machine factory founded in 1909 by Anton Piller. While the plant in Osterode specialized in electric motors and generators, the production of the fans was relocated to Moringen. After the sale of the company to the RWE Group, two independent companies emerged from these business units – one of them the Piller Industrieventilatoren GmbH in Moringen. In 2001, Bernd Klostermann and Nils Englund acquired RWE's fan division as joint shareholders – and made it a global player in the field of high-performance blowers and compressors. In 2013, the company was renamed Piller Blowers & Compressors GmbH. For three years, today's managing directors Christoph Böhnisch (r.) and Stephan Merkel (l.) have been managing the fortunes of the company, which is now fully owned by the Klostermann family.

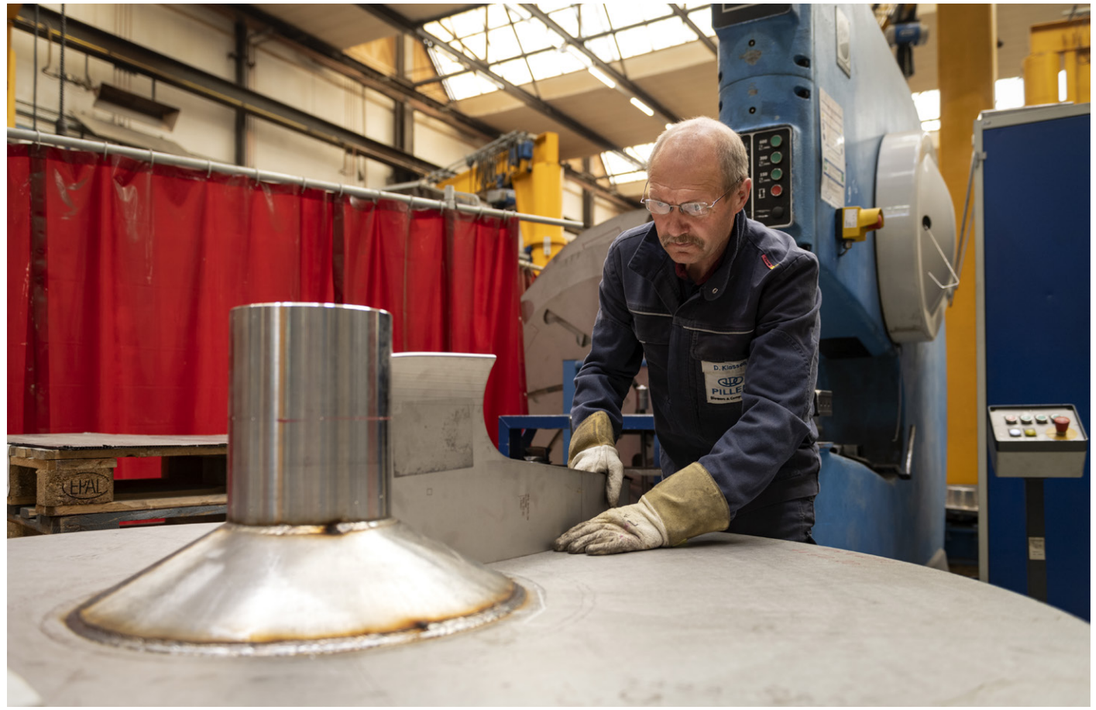
» *The biggest challenge in mechanical engineering at present is to develop digital services and solutions.* «

CHRISTOPH BÖHNISCH

In order to reprocess and heat up the still warm vapor, less energy has to be used than for the production of the same amount. "Although our machines consume energy, customers can reduce the energy used in the overall process by a factor of six to eight," says Böhnisch. At a bioethanol manufacturer, for example, PILLER installed 14 machines. "After just over a year, the investment costs of more than ten million euros had been amortized by the energy savings of around 35 megawatts," explains the 53-year-old, who is responsible for research and development, production, sales and marketing. The Lower Saxonians not only ensure enormous cost reductions for its customers, but also enable them to take major steps on the way to CO_2 neutrality. "Rising energy prices are always an argument for our machines," explains Stephan Merkel. "Even if they already take the issue of CO_2 neutrality seriously – when it comes to compliance with legal requirements or bans on certain energy sources such as coal – customers contact us." PILLER not only receives greenfield orders, the participation in the complete construction of a production facility from scratch, but also brownfield orders, the retrofitting of existing plants. "Last year, we recorded an increase in orders of 30 percent, and we expect 20 percent more this year," says Böhnisch. So, things are obviously going well for the German based experts – who, however, do not sit back and relax, but are already working on new ideas.

"The biggest challenge in mechanical engineering at the moment is to develop digital services and solutions," explains Böhnisch. The aim is to offer additional services in the fields of operation, control, and optimization of customers' processes. "Digitalization must not be an end in itself. We are aligning this with the changing expectations of our customers", he said to further elaborate. More and more young decision-makers today are used to controlling processes via apps and gaining insights into business-critical processes at any time. "As a





Totally focused: At every production step, employees carry out a wide variety of checks again and again – both by hand with appropriate templates (above) and with the help of machines (left) – so that all individual parts meet their tasks later on.

mechanical engineering company, we have to meet these requirements in the future," Stephan Merkel adds. The 47-year-old has been with the company for six years and manages the areas of IT, finance and human resources – and as the son-in-law of the owner Bernd Klostermann, he protects the interests of the owner family. Together with Christoph Böhnisch, he took over the executive management from Nils Englund in 2019.

IN THE MECHANICAL ENGINEERING INDUSTRY – where PILLER is at home and which is largely perceived as not particularly agile, but rather sedate – the starting conditions for the necessary digitalization push could not be more different: Some medium-sized companies continue to rely exclusively on their traditional strengths such as a high level of manufacturing know-how and above-average product quality. Others have anticipated that they can enormously increase customer benefits with digitally provided services and open up new sources of revenue for themselves – and must if they want to remain a relevant provider in the future. These include PILLER. "We're halfway early," says Böhnisch, born in Bavaria, with almost North German-looking restraint.

IF YOU TAKE A CLOSER LOOK, the initial situation at Piller Blowers & Compressors looks promising: For several years, the digitization of the own business processes has been driven forward, software has already found a firm place in the everyday work of many departments. For example, the company's own research and development department has been using state-of-the-art software and hardware for years, with which the blowers and compressors are repeatedly analyzed in detail from an early stage of development. This makes it possible to improve each individual piece step by step and to fully exploit the efficiency. This also lays an important foundation at PILLER that no company should underestimate when it comes to planned digitization projects: The employees involved understood that digital transformation is not a path from A to B, but a continuous optimization of processes on the basis of collected data.

Anything but superficial:
In the company's own paint booth, PILLER protects components against corrosion and wear.

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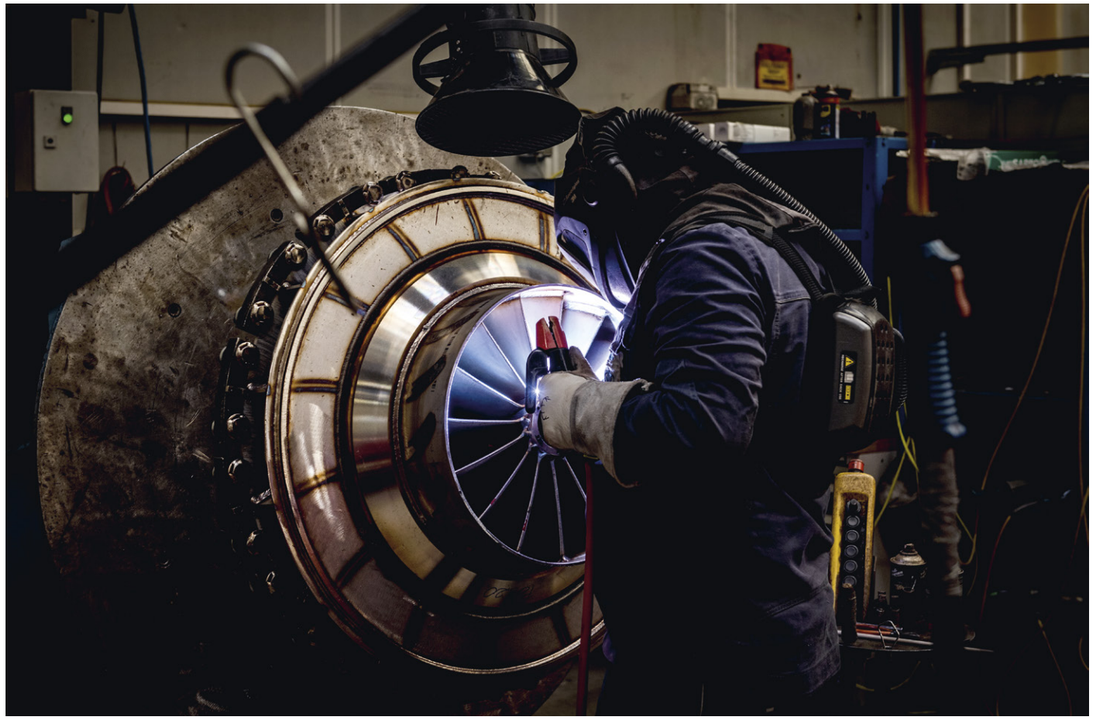

Craftsmanship: When welding the blowers, it is not possible in some hard-to-reach places without specialists with a sure touch.

However, digitization is not only well advanced in the Research and Development department. In 2018, PILLER began to implement an ERP system, a software for controlling all business processes. “In our size, we were a kind of pilot customer in our industry,” Merkel says in retrospect. First, the area of finance was implemented, then in 2020 all other divisions followed suit. This step-by-step implementation is a reasonable approach to make digitization successful: More and more employees are learning how to use the system without the risk that nothing will work in the company anymore. Today, PILLER uses a very modern system. “For example, I always keep an eye on our sales pipeline with up-to-date information,” says Böhnisch enthusiastically. “I always know which orders have been signed, which new sales opportunities have just come up.”

MOBILE WORKING is also the norm at PILLER in some business units: The global sales team is on the road with iPads to appointments with customers, and the IT department was able to enable employees from eligible departments to work from their home office at the beginning of the pandemic. Unlike many medium-sized machine builders, who had neither the technical equipment nor the corresponding experience for home office workplaces. Stephan Merkel also takes advantage of this opportunity, repeatedly working from his hometown of Bochum, Germany, by the day, while his colleague can be found mainly on site in Moringen. Whether connecting the iPads to the company’s IT or for the operation of the ERP system: PILLER relies on a cloud approach, not on the operation of the systems in its own data center. “From our point of view, operation in the cloud and in the hands of experts is much safer and more reliable than we could manage ourselves,” explains Merkel.

This very good starting position in the digitization race is also significantly improved by another factor: the PILLER products. “Our machines are equipped with sensor technology by design,” explains Böhnisch. During operation, the sensors provide information – for example, on compliance with preset limit values – to customers' production control centers. And it is precisely this sensor information that can be used as the basis for additional digital services in the future. In workshops, an interdisciplinary team has begun to outline these digital services in more detail. On the one hand, PILLER plans to make this data available via the Internet, evaluate it and use it for continuous optimization of the machines used. “Of course, customers do not want their processes to be monitored by us,” says CEO Merkel. “We would recommend measures to our customers to save even more energy and thus money in their production.” On the other hand, the topic of ‘predictive maintenance’ is on the list. This involves carrying out predictive, planned maintenance or repairs on basis of collected performance and wear data before an unplanned and significantly more costly downtime of the machines occurs. In any case, there is a high probability that the Moringen based experts for blowers and compressors will be busting open doors to their customers with the prospect of even greater savings opportunities and shorter downtimes.

IS THERE NOT A SINGLE DROP OF BITTERNESS in this success story? Yes, there is, at least a small one: The family-owned company cannot easily cover the personnel requirements triggered by the numerous new orders. “Although we succeed time and again in attracting highly qualified employees, we need significantly more,” says Merkel frankly. “We are particularly successful with people who have connections in the region and are moving back to their roots – and once people are with us, they stay,” adds Böhnisch with conviction. No wonder: They then work for a healthy, fast-growing technology leader where – despite all the challenges, including digital ones – the signs point to further growth. ***f***

Location loyalty: In 2016, the new PILLER administration building was opened at the headquarters in Moringen, Germany.

Facts and figures about Piller Blowers & Compressors GmbH

Worldwide	425 employees
Export share	more than 85 percent
Establishment	1909
Subsidiaries	in USA, China, and Singapore
Joint ventures	in Korea, Brazil, and India
Agencies	in Africa, South America, Asia, and Europe

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Real heavyweights: In the final assembly hall, the individual components of the blowers and compressors are assembled into finished machines, which weigh up to 40 tons, and finally tested.