



HABERMANN AURUM PUMPEN

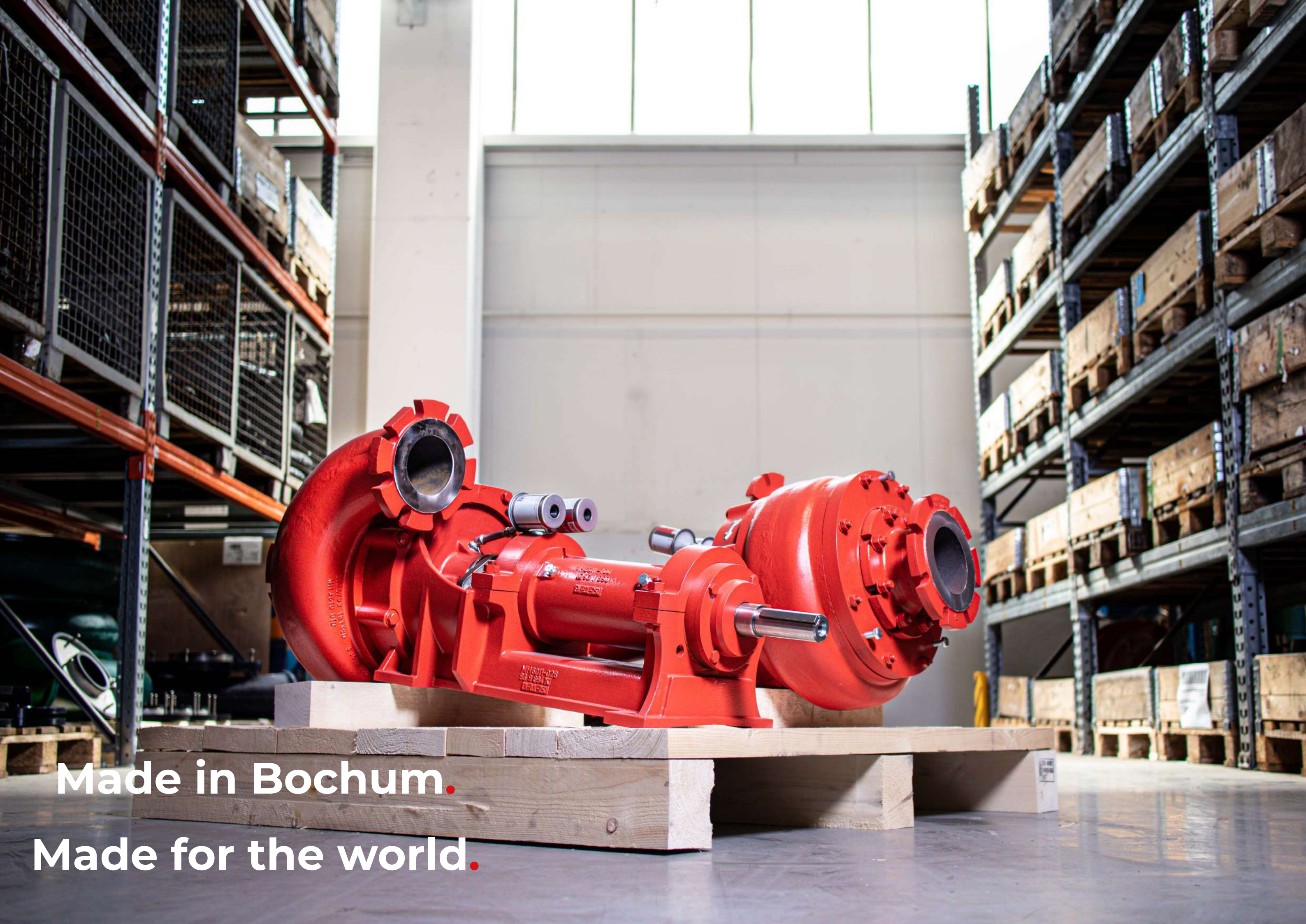
PUMPS | VALVES | DREDGERS | ENGINEERING

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Made in Bochum.
Made for the world.

Our history.

The history of our company dates back to 1927, and right from the start we have adopted an innovative approach with a primary focus on quality, which we have successfully maintained throughout the years. We have continuously improved our products' efficiency and their performance ever since. In 1995 we went global after taking on our first international clients and in 2018 we have united our operations center with manufacture site in Bochum, which has enabled us to manage all production processes from one source.

In 1927, Arthur Habermann established an engineering firm in Bochum, which offered pump related services for industrial projects. The first major customers were instantly found among the flourishing mining companies in the Ruhr region. The firm was rapidly expanding and together with his competent team, Habermann developed a pioneering, heavy-duty slurry pump that was specially manufactured to his specifications. In 1959, our creative team has engineered another highly technological product at the time, specifically the first non-metallic pump with replaceable wear parts. This resource-saving and highly adaptable pump solution quickly enabled Habermann to secure large companies as clients in chemical, construction and steel industries, in addition to sand and gravel processing industry.

1967 saw the start of polyurethane production, which has significantly enhanced the quality of Habermann pumps, particularly their durability. All these factors combined have led us to make the best offers of comprehensive pump solutions for a wide variety of applications and operations.



1995 has opened a lot of new market opportunities and Habermann Aurum immediately attracted new international buyers, who placed their initial orders for centrifugal pumps of various types. Most of our sales are now generated in European Union countries, CIS states, United States, Canada and South America. At the same time, there is a rising demand for our pumps in Asia, especially among Middle Eastern countries, in addition to African continent.

Since 2012, we have commenced international sales of all pump operating elements, such as fittings and valves. In 2018, our head office was moved to a new location in Bochum, another important step in our company's expansion that allowed us to further optimize our business operations. In 2019, we took over a local mechanical processing facility, which meant that all pump supporting components and spares can now also be manufactured in-house, making it a one-stop shop for all production needs. In 2020, our company was certified in the areas of quality management, occupational safety and environmental protection. Up to date, we have supplied over 30,000 pumps worldwide.

Who we are and what we do.

Habermann Aurum Pumpen combines decades of experience engineering pumps and valves with state-of-the-art technologies. Our extensive product range of pump systems and all related elements covers the most demanding industries and applications.

Habermann Aurum Pumpen GmbH is a global manufacturer and supplier of industrial pumps, valves and fittings. All goods are prepared in Bochum to supply our customers around the world, specifically in Western Europe, North and South America, Middle East, Asia, Africa and the CIS countries, among others. Habermann Aurum Pumpen's slogan is therefore simple, yet inspiring.

Made in Bochum. Made for the world.

We have created a one-stop shop to support all stages of pump production, from concept through manufacture and installation. Whether you are looking for a reliable existing design or a customized, precisely fitting pump solution, we are here for you, along with our qualified assistance services to guarantee our mutual success. Over the past 100 years, we have repeatedly implemented new, groundbreaking technologies, particularly the introduction of first non-metallic pump or the most recent improvement of pump performance using CeramCarbide. We are also the market leader in terms of quality and performance in the field of slurry pumps. We have built our company on the foundation that experience,

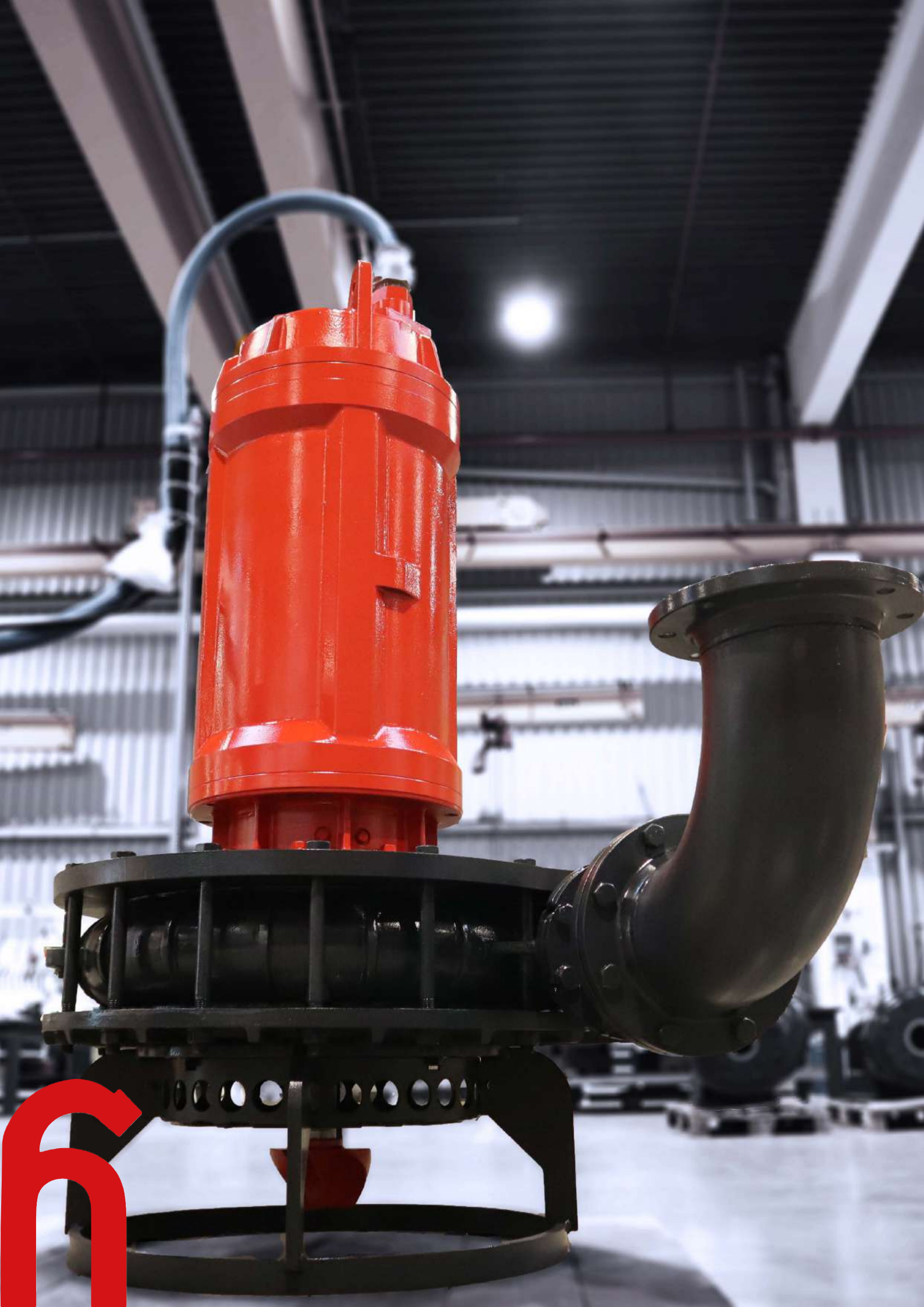
expertise and innovation are inextricably linked and all-important.

Our highly motivated employees are always on top of things. We can guarantee to offer you the best suitable and sustainable pumping system, that is always developed in partnership with our customers. We know and understand their requirements. Our engineers have decades of experience under their belts, fluently speak a total of 10 languages and are always on site and ready to assist our customers.

In addition to pumps, our diverse product portfolio also includes all applicable fittings and valves along with other supplementary parts. Our goal is to find the right, and above all, comprehensive solution to meet your requirements.

We have ensured that our products are the most robust and durable on the market, they often serve decades longer than comparable pumps from our competitors. That being said, if you are looking for pump modifications or repairs, spare parts or maintenance, we are always happy to help. We are proud of our products and they remain important to us throughout their entire service cycle.





Another advantage of the decades of experience is our company's gigantic archive, where we store the most diverse construction plans and documents that cover nearly past hundred years of operations. This archive is the key to finding answers and solutions to all pump questions imaginable, even if the original product was not purchased or installed by us. The second guiding principle of our company is therefore:

We know how because we did it ourselves.

Another additional detail, particularly appreciated by our customers, is that we provide expert on site assistance and follow-up when needed. With our extensive network of branch offices, international strategic partners and representatives, we have ensured our presence where our customers need us, which, in turn, allowed us to strengthen our market positions globally.

We also understand the importance of running a sustainable business. Therefore, we have implemented strict policies regarding occupational health and safety regulations at work. As a traditional company, we also fully commit ourselves to the protection of the environment by consciously using our natural resources. As such, we believe that our resource-saving approach combined with our pumps' durability is what makes us a particularly sustainable company.

All the above-mentioned principles have made up a formula that enabled us to build a global customer base. Our clients list includes a wide range of domestic and international mid-size companies, as well as global industry giants, such as: ThyssenKrupp, NLMK, Liebherr, BASF, Clariant, Lanxess, Metinvest Holding and

Arcelor Mittal. As a result, our company has prospered for many years and we strongly intend to keep growing. Naturally, this growth will be underpinned by the values that have shaped us for nearly a century.

All these years we have remained true to one principle above all:

The best pump does what it is supposed to do: Pump.

Our Markets.

Sand and Gravel // Cyclone Feeding //

Pigment Industry // Tunneling //

Special Civil Engineering //

Vertical Drilling and Wall Milling // Sugar Industry //

Paper and Pulp Industry // Separation //

Sewage Treatment // Animal Waste Disposal //

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Based on our long-standing experience, we are able to offer our customers high-quality pump solutions across wide range of applications and operations, such as: chemical and process industries, raw material extraction and processing, tunneling and foundation engineering, construction industry, water and wastewater management, to name a few. We also provide our customers with an in-depth expertise on pump selection and its operation in order to achieve the highest pump productivity and efficiency.

Over the course of company's multi-decade history, we have had considerable success in developing and manufacturing pumps, but we also devoted much of our efforts to exploring new effective methods of extraction and processing of sand and gravel. It just goes to show that we have been in operators' shoes ourselves and were able to accomplish considerable progress in pump and machinery optimization for this specific application. This excellence-driven approach applied to everything we do and produce will guarantee the highest customer satisfaction with each of our pump designs.

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Made in Bochum. Made for the World.

We know everything one needs to know about pumping system requirements, whether it is the pigment production, grinding mill circuits in mineral processing industry, concentration or flotation process in mining, grey water handling system, ore slurry pumping systems, diaphragm wall construction or pipe jacking tunneling technology. We can and we do assist our clients every step of the way. We sustain our company by building strong relationships with our customers. It defines how we work in partnership with existing clients and how we win new businesses.

Furthermore, our manufacture site in Bochum is operated in accordance with all necessary guidelines regarding occupational safety and environmental protection regulations. Made in Germany stands for exceptional engineering skills and premium quality. Made in Bochum stands for the same values and some more.

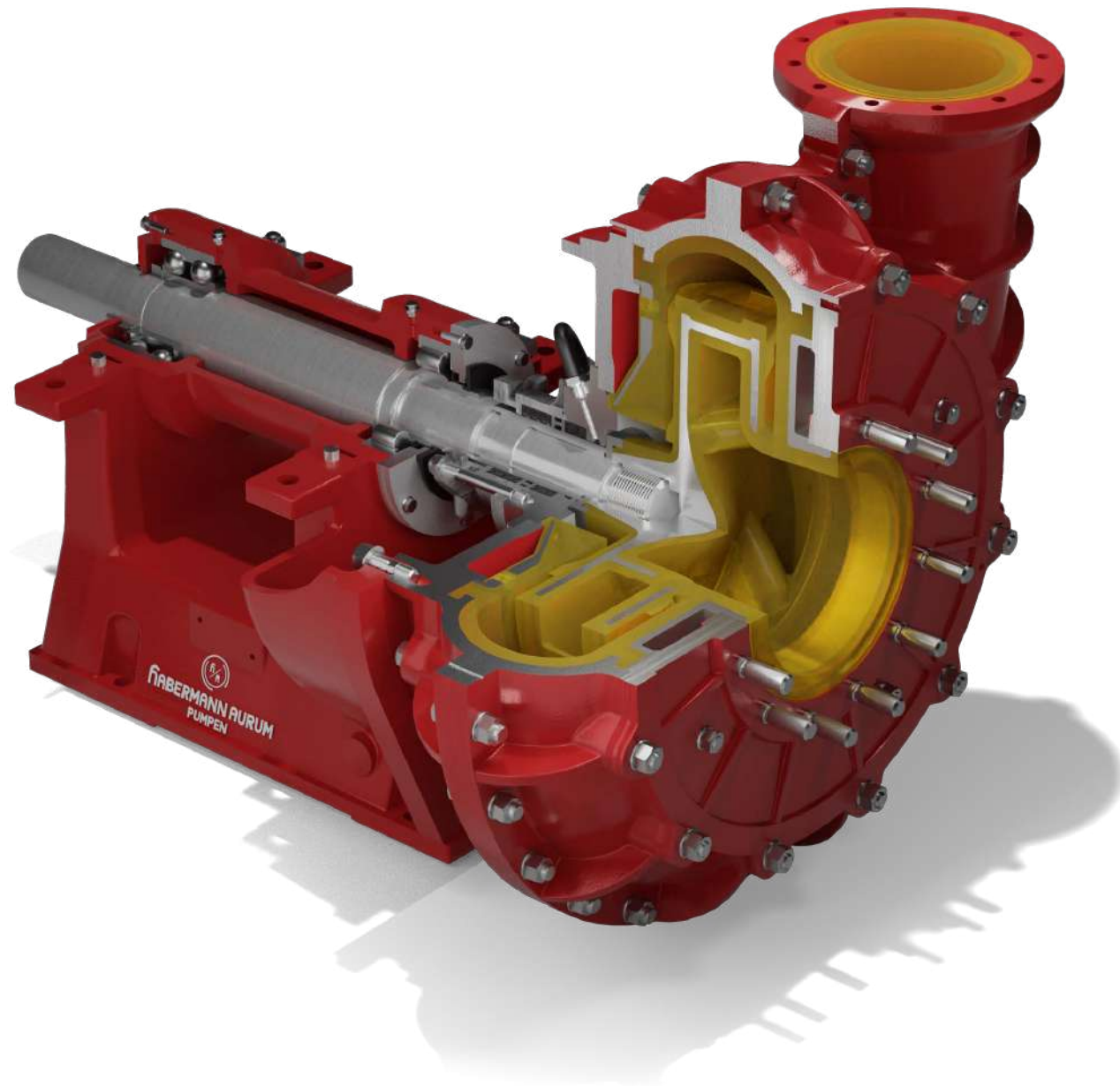
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We pump quality
into your project.

Our products.

Manufacturing quality pumps is our core competency. Whether standard or custom-made design, we always offer complete solutions to your specific area of application.



Slurry Pumps

Pump performance and its selection depend on the application conditions and type of solids. These pumps are designed to undertake a job of pumping liquid mixtures with a large share of solid material masses. Such highly abrasive mixtures demand a particularly robust and powerful technology of its pump components.

Water Pumps

Water pumps are designed based on the physical properties of the water. However, all water is not the same. Numerous factors must be considered in order to ensure optimum pumping performance, for instance: the size of the plant, the amount of water to be processed, and intended usage.

Chemical Pumps

Chemical pumps process toxic, highly explosive and corrosive substances. This aggressive environment poses a particular challenge for the overall pump structure and its main elements stability. However, our customers place their complete confidence in Habermann Aurum pumps for such condition sensitive applications.

Sewage Pumps

Whether you are planning to set up a drainage system at the construction site, or a burst pipe needs to be managed, submersible pumps are here to match your project needs. A robust, yet maintenance friendly design and Habermann quality standard, that has been in place since 1927, make our submersible pumps the most reliable and durable choice for extreme application conditions. Highly wear-resistant components and our durable design, e.g., high-chrome impellers utilizing CSRS technology, ensures operating efficiency and longevity of the pumps, even when handling such highly corrosive substances as sand and gravel.

The Habermann Aurum has a wide product range to choose from. In addition to classic construction pump (up to 45kW), we offer slim line configurations to perfectly match the limited space requirements, such as agitator pumps and sewage pumps.

Industrial valves

With continuous expansion of our operations, we also began supplying our industrial valves and fittings. Apart from securing a self-sufficient and flexible production, this step has also enabled us to provide complete and perfectly fitting solutions for your pump systems.

Special designs

We are constantly striving to set ourselves apart from our competitors. Our innovative ideas and designs speak for themselves, particularly the processing method for silicon carbide castings: instead of an easily brittle monobloc we line the outer housing of the respective pump with our CeramCarbide silicon carbide winding. This new feature makes the pump more durable and easier to repair. We also offer particularly elastic pump housings fitted with our polyurethane technology APFlex. The unique nature of these castings is in their ability to achieve the so-called trampoline effect and thus have major advantages in terms of wear behavior compared with metal castings. This lining allows the pump to withstand maximum pressure when handling abrasive and corrosive media. This prolongs their service life to the greatest possible extent compared to conventional steel castings. Both features make our pumps extremely robust and durable.



Pump service.

Keep your pump functioning properly with Haberman's pump service. Our professional team of experts is here to offer you complete optimization and repair services to ensure the safety and efficiency of your pumping system.

Should your pump ever fail, or its overall performance has dropped, we will provide you with the best possible solutions on how to fix the errors and extend your pump's shelf life. Initially we conduct a full system evaluation, which will help us define any shortfalls or workload issues that need to be addressed. Upon this assessment, we will determine how big of an adjustment your pump will need and offer you a repair service on site or a possible remote optimization. Our service technicians quickly recognize any malfunctions and give their technical advice on whether it is better to replace certain parts or replace the entire unit. Our goal is to not only properly repair your pump, but to clarify why a possible failure could occur and ensure that all pump components are in fully operational condition.

We also offer maintenance services which include pump assembly analysis, performance review, productivity assessment, optimization and follow-up. Our proven formula is clear definition of tasks, professional support and reliable service.

Whether you need to repair Habermann or any third-party pumps, get in touch with our pump service team, and they will be happy to assist and answer all questions. We look forward to working with you and help you correct any pump related issues.

Machining services.

Pump is the heart of any plant. It must be well built to withstand extremely challenging conditions, such as high pressure and aggressive media. Hence, it is crucial to ensure that all pump parts and components are as reliable and durable as the pump itself.

Thanks to our own fully equipped machining facility, we can meet these critical requirements and perform machining of our pump parts and components independently. It allows us to guarantee the highest quality control of all finished products and eliminate possible defects and errors. Additionally, it allows us to accelerate production flow and meet the demand of on-time supply for all pump services.

Machinery

Our diverse machine park, along with our expert staff, is the core of our production. Our facility houses lathes, milling and drilling machines to ensure strict accuracy and consistency when manufacturing pump parts and spares. Our wide variety of machines allows us to work with many different materials, namely structural and stainless steel and complex casting molds. We also specialize in machining of chilled cast iron and other highly tempered materials, which enables us to satisfy every possible design requirement.

Precision

When it comes to large pumps for heavy-duty applications, it is extremely important to carry out precise machining

to ensure that the pump remains hermetically tight, leak-free and can withstand wear, tear and high pressure. With that being said, we manufacture both small and large parts, on the turning and milling machines. With wide spectrum of machining operations, we can manufacture any intricate part according to your specifications. Our customers can also have their existing workpieces measured in 3D to ensure their design ideas are thoroughly executed to the last detail.

Sustainability

As we progress further, we continue to explore ways to protect our environment, it is of enormous importance to us. For this reason, we constantly invest in filter and disposal systems and regularly train our employees in resource-saving handling of operating equipment.



Mechanical Engineering.

We are experts in plant engineering. Whether it's cooling systems for blast furnaces, the treatment of toxic substances or the installation of filter systems, we can implement and support it for you.

Aurum Engineering is an internationally operating company that serves industrial process facilities of various types and capacities. Based on our extensive experience working with various sites and strong technical skills, we offer customized solutions to help you accomplish your production goals. Learn about our range of products and services to support you in managing your industrial plant effectively. Whether you are looking for cooling systems for blast furnaces, treatment methods for toxic substances or filter systems, you can rely on us to develop, design, manufacture, install and implement reliable solutions to benefit your operations.

Cooling systems

Aurum Engineering specializes among other things in cooling systems of blast furnaces. We offer all known cooling technologies and designs to match your individual requirements. We never compromise quality and always aim to deliver the most reliable and secure cooling solutions. In this respect, much effort has been put into conceptualizing and perfecting copper flat plate coolers to ensure the highest thermal productivity.

Plant configuration and technical support

We carefully plan and execute all aspects of plant engineering, such as: project organization, infrastructure layout, identifying technological requirements, auxiliary equipment manufacture and supply, automation systems, optimization, training and technical support. We carry out design and planning projects for new power plants and retrofit existing ones. Our main objective is to offer comprehensive solutions for various thermal power stations, metallurgical plants and construction sites. To explain further, we specialize in the following installations: gas purification systems for the treatment of operational units, gas mixing stations, compressed air and nitrogen drying systems, converter gas heat recovery systems, air separation units, and various water filter systems.

Electrical installations

Industrial plants are naturally dependent on constant and safe power supply to guarantee its security and integrity at all times. We have extensive experience in developing power supply solutions, particularly in network substations of 110-330 kV voltage, as well as 6 kV, 10 kV and

35 kV voltage distribution substations. We also cover the following services for industrial facilities: complete transformer substations, general power supply and lighting installation for the workstations and sites, electrical grounding, fire alarm and lightning protection system. We can further optimize your production site with multi-carrier energy network integrating different energy sources like electricity, water, natural gas and heat, including heating and ventilation systems.

Water supply and drainage systems

Our experienced engineers design and integrate water supply and wastewater disposal systems for a number of industrial process facilities. With our wide range of water regulating solutions, we can guarantee to meet your specific technical and operational needs. We undertake projects of any complexity, in particular implementation of closed loop water recycling systems with "closed" "clean" and "dirty" water units, including the evaporative cooling systems. To ensure optimal operating conditions we also install and maintain various pumping stations, specifically technological, booster, fire-preventative, potable or wastewater types, as well as stormwater and wastewater treatment systems. We also plan and execute drainage systems for various construction sites, including the installation of a regulated network of observation wells to monitor the level and quality of the local groundwater.

Production monitoring and Automated process control systems

Today, automation solutions and control measures are becoming increasingly important and practically every production site has integrated these new technologies in order to stay competitive and relevant. An automated control system will help you run secure

operations, minimize disruptions, avoid downtime and maintain maximum performance. With our automated systems you can successfully manage your plant operations and ensure optimal and secure workflow conditions, which is especially crucial when handling critical equipment and storing flammable materials. Explore our range of automation solutions, which include: automated process control systems, SCADA and PLC software control systems, cable routing systems, installation of power distributors, design and integration of motor control centers, assembly of control cabinets of any complexity, on-site communication network and video surveillance systems.

Sustainability

As a responsible company, we always weigh potential technological risks associated with industrial plants and pay special attention to ensuring their safe operations. To fulfil our obligations, we invest in the treatment of all condensates that accumulate during manufacturing processes. We also carry out environmental impact assessments (EIA) and adopt technical measures for civil protection. Additionally, we install sound insulation systems to minimize the noise and vibration impact of harsh industrial conditions.

Our Customers and Locations.

94 Years

Experience

30.000

Pumps sold

300

Pumps in portfolio

40 Years

Average service life of a pump



100

Sales countries

30

Sales partners and subsidiaries

Our commitments.

Adopting the principles of responsible business conduct is of a significant importance today more than ever. It is our obligation and the foundation for lasting success, which corresponds to our commitment to do right by our clients, employees and environment. Hence, we take full responsibility for all our operations and implement only sustainable business practices within our company.

Our employees

We highly value the people behind our products and services, they are ones who make our progress possible. Hence, it is our responsibility to create a safe, healthy and fair working environment for all employees across our network. As a globally active company, we are committed to a fair treatment of all employees, cultural diversity and equal opportunities. We especially pride ourselves in our multilingual team of professionals, who can competently assist you in 10 different languages. We recognize that motivated, committed and skilled staff are essentially a driving force of business growth. Therefore, we continue to facilitate their education internally by introducing foreign languages classes to broaden their range of skills. At the same time, we encourage ongoing training of all employees for the purpose of empowering their development and career growth.

Our workplace standards and safety

With long-term benefits in mind, integrating sustainability practices into our business has become a cornerstone of our company's strategy going forward. Therefore, we got certified by an assurance company to ensure we comply with standards in quality management, occupational safety and environmental protection. This step forward has enabled us to unify our operations around the world under the same quality control umbrella and provided our employees with a reliable knowledge management system.

In addition, we have a strict safety policy to ensure compliance with all regulatory procedures of occupational health and safety of all employees across our network. To further enforce these standards, we have also implemented a health management system in place. We believe that workplace safety is crucial in our line of work, therefore all our production machinery, equipment and tools are always properly guarded and regularly maintained. Our employees receive training in the proper use and safe operation of equipment and tools that they handle.



HABERMANN AURUM
PUMPEN



Our environment

As a globally active company, we recognize the importance of environmental responsibility and abide by conscious use of natural resources for all manufactured goods. Hence, we only offer forward-thinking pump solutions with a view to service life and very importantly economic use of materials to lessen the strain on the environment. Assuming responsibility beyond legal requirements has been a fundamental approach in growing our business. Being that we are a traditional company, the environmental protection plays an integral role in our objective of doing business responsibly. We invest in developing new solutions to minimize our environmental footprint. By manufacturing products from alternative materials with a longer operational lifespan we also contribute to the waste reduction. We are working on building an ethical supply chain that creates high-quality, low-impact and long-lasting products.

Our progress

We always design our pumps to be as economical as they are efficient, which explains their superior longevity and reliability. Our technical competence and versatile pump solutions are the reasons for the high demand of our products, but it is also the foundation of values we have been nurturing for nearly 100 years. With our safety-oriented approach, innovation strengths and focus on sustainability, we are confident in our future success. We will continue to maintain these high standards and to build customers' loyalty around the globe.



**WE LOOK FORWARD TO
WORKING WITH YOU!**

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