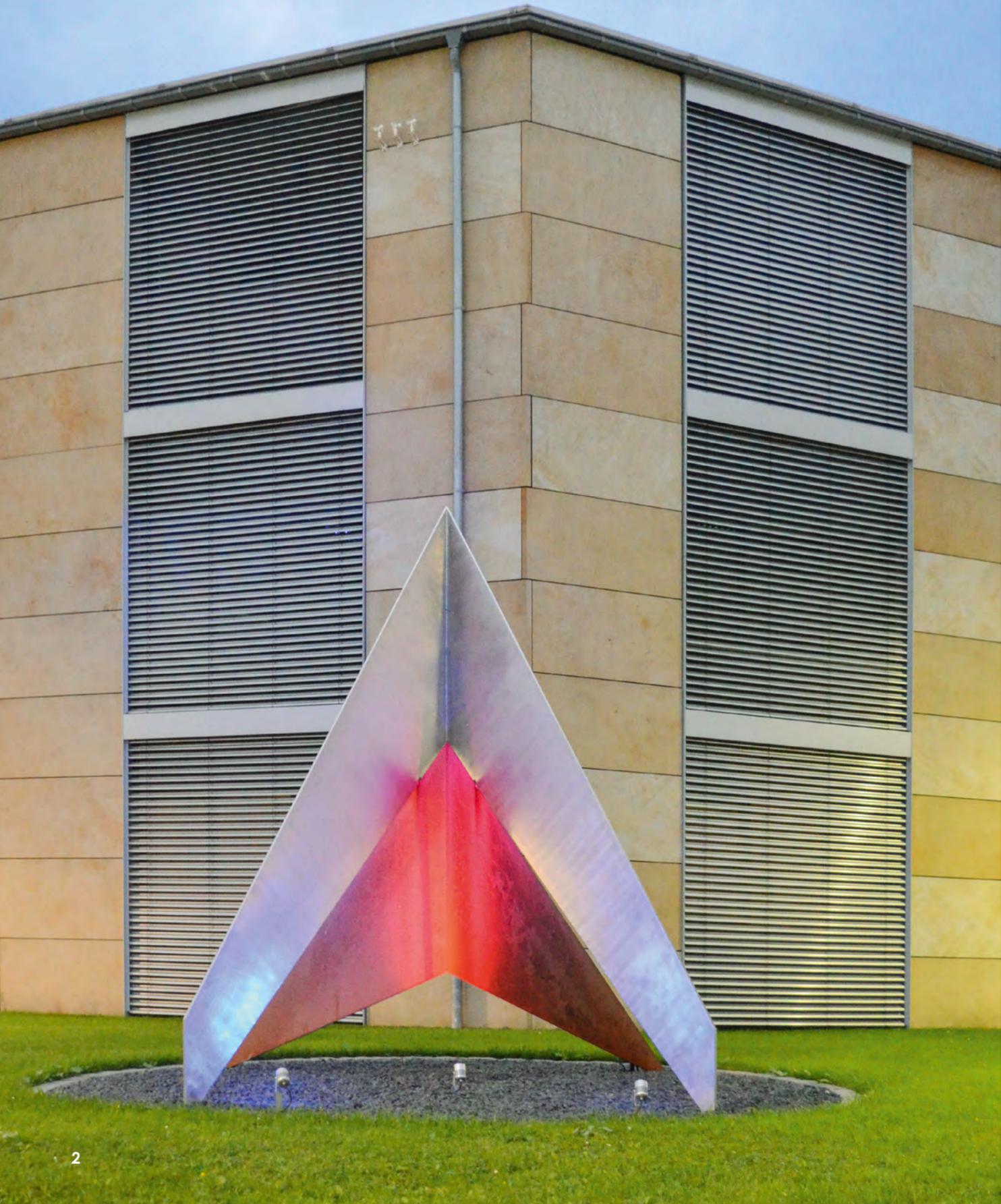




**Individual
heat treatment systems
from the global
market leader**



Dear business partner or prospective customer,

This brochure will tell you more about the schwartz Group's history and achievements on a nostalgic journey through more than 30 years of our corporate history. Numerous technological advances and breakthroughs have been milestones marking our path. Nowadays, we offer you a range of unique products, technologies and services that we have developed, and continue to develop, for all our customers' benefit.

As a reliable specialty supplier, we will be at your side from the initial enquiry, system delivery and start-up right through to after-sales support.

See for yourself how our products and services can work for you!

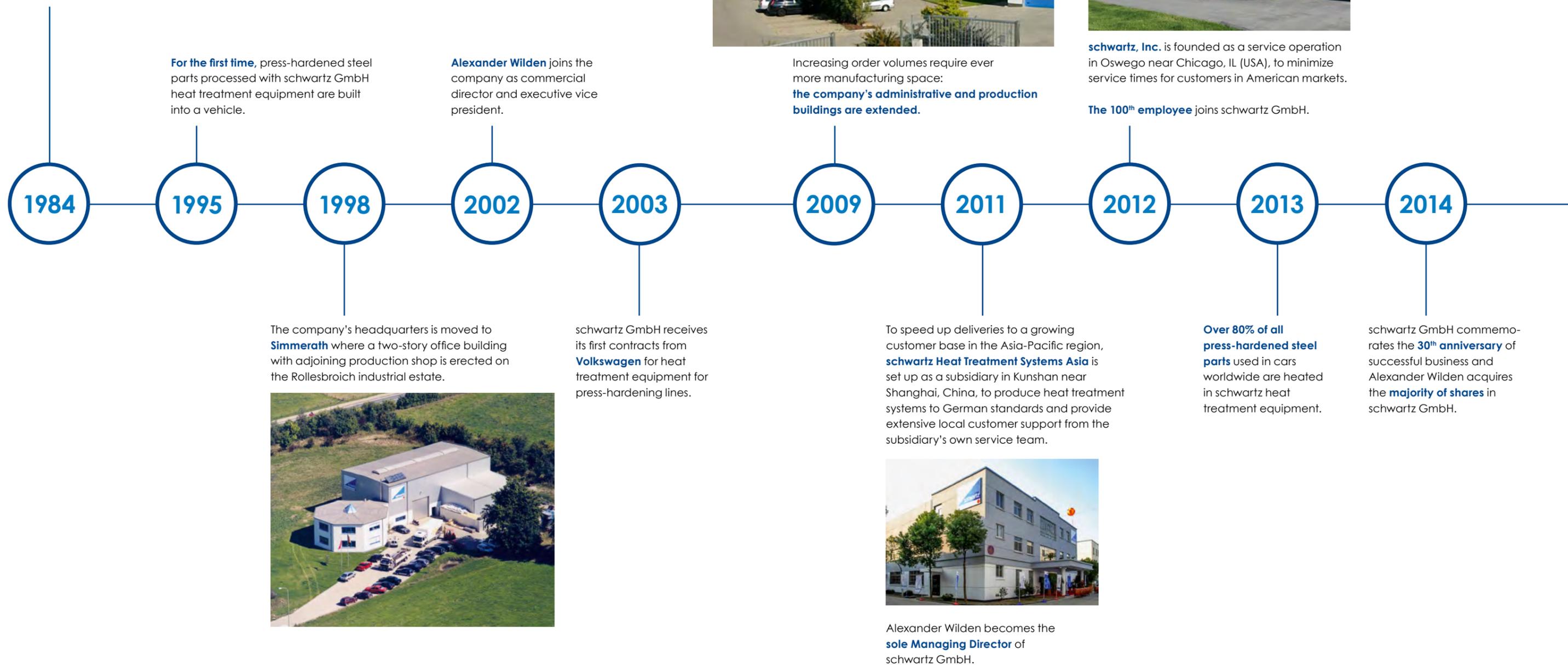
Your schwartz Group team

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Our success story: From one-man business to world market leader

Rolf Schwartz, Head of Design at the Otto Junker GmbH factory at Gevelsberg, sets up his own business when that site closes: schwartz GmbH manufactures and designs heat treatment systems for steel, aluminum and nonferrous metals.





As the company's administrative building, enlarged once in 2009, can no longer accommodate the growing workforce, several departments are relocated to a **new office complex erected nearby**.

schwartz GmbH ranks among Germany's **500 fastest-growing companies** according to a survey conducted by FOCUS news magazine in co-operation with the Statista statistics portal.



Production capacity at the **Simmerath headquarters site** is expanded again.



Relocation of Hütte GmbH from Düren to Aachen, which increases Hütte's production space from 2,500 m² to over 14,000 m².

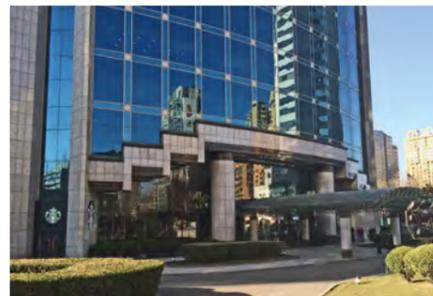
2015

For its innovative work in heat treatment equipment for press hardening, schwartz GmbH receives the **AC² Innovation Award of the Aachen Region** – the innovative system is capable of producing different, narrowly defined temperature zones in one blank.



2016

schwartz Heat Treatment Systems Asia opens an **additional sales office in Beijing/China**.



schwartz GmbH is officially acknowledged by the University of St. Gallen, Switzerland, as the **global market leader in the field of heat treatment systems** for press-hardening applications.

2017

The schwartz Group acquires **Hütte GmbH, Düren**.



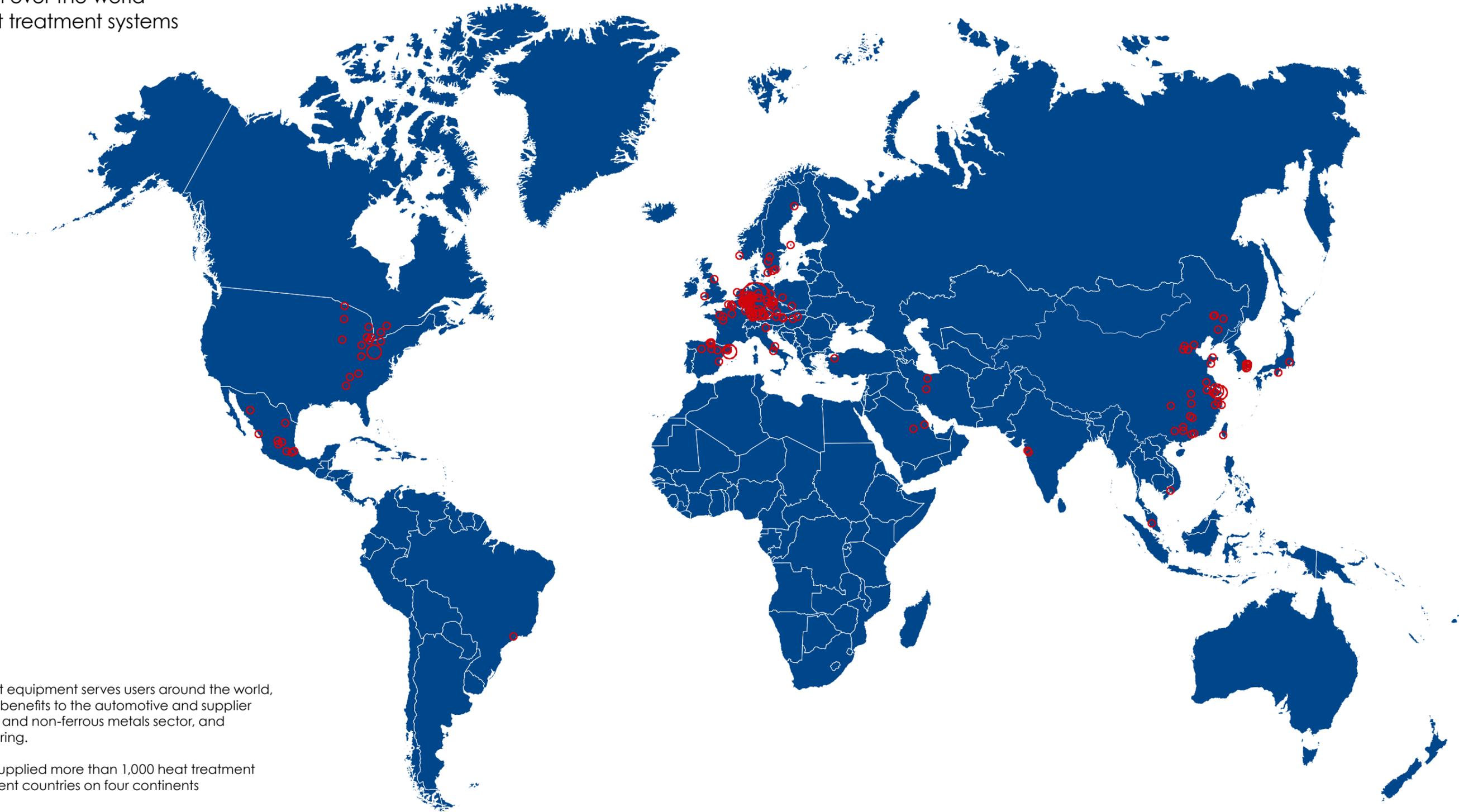
Alexander Wilden becomes **the schwartz Group's sole shareholder**.

schwartz Heat Treatment Systems Asia opens two more service sites at Chongqing and Guangzhou, China.



The schwartz Group – a global success

Customers all over the world
trust our heat treatment systems



Our heat treatment equipment serves users around the world, delivering multiple benefits to the automotive and supplier industries, the steel and non-ferrous metals sector, and aircraft manufacturing.

To date, we have supplied more than 1,000 heat treatment systems to 30 different countries on four continents

Individual solutions to match your needs



Our main goal is to meet your unique application requirements. As a reliable specialist, our competence and commitment will support you at all times.

We hold patents on many technological innovations – know-how that goes into the production of every schwartz heat treatment system.

We design and build each heat treatment system using state-of-the-art technology adapted to your specific production needs.

Only our unique solutions and unvarying quality can provide you with equipment that combines high process reliability and availability with low energy costs – for all your press hardening, hardening, annealing, brazing or forging jobs in steel, aluminum or nonferrous metals.

Individual heat treatment systems for press hardening



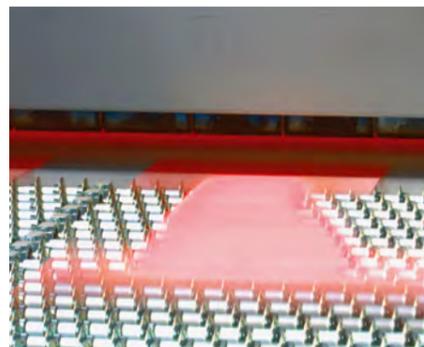
As the world market leader in heat treatment systems for press-hardening lines, we mainly supply automotive manufacturers (OEMs) and their suppliers (tier 1, tier 2) and the steel industry.

All equipment leaving our factories is custom-designed and built to match our global customers' production needs.

Hundreds of installations in a 30-year success story



We are the world market leader in heat treatment equipment for press-hardening applications.



In more than 30 years, we have designed, built, integrated and commissioned hundreds of heat treatment systems for press-hardening processes all over the world.

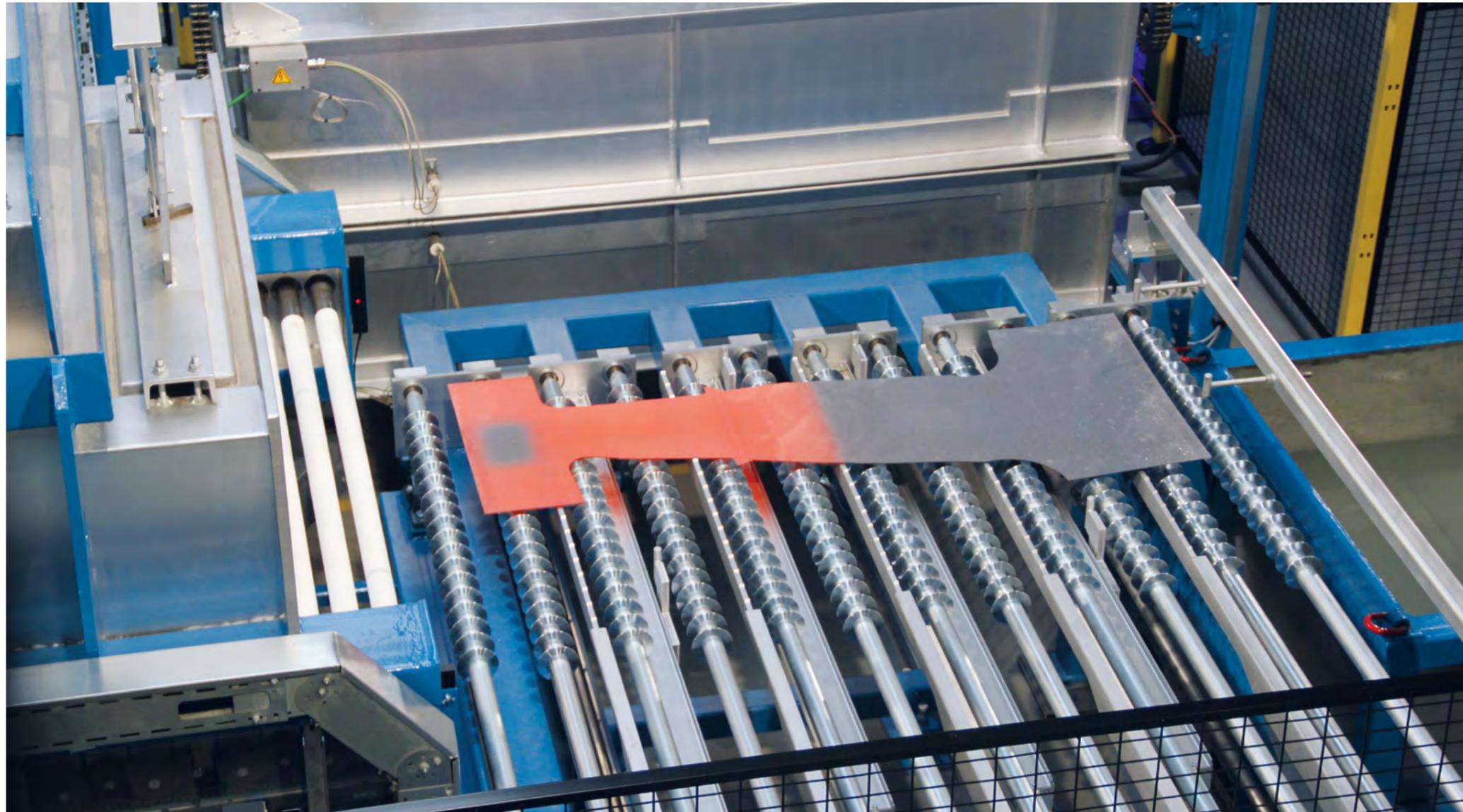
Building on this vast experience and backed by ongoing product improvements, we offer innovative and customized heat treatment solutions to meet your specific press-hardening production requirements.

Satisfied customers and the resulting brisk demand have gained us the **world market leadership in heat treatment systems** for press hardening.

Our portfolio includes equipment characterized by:

- Diversity in design, e.g. vertical or horizontal twin-type or single lines
- Operability under normal atmospheric conditions, dried air, or protective gas
- Suitability for heat treatment of coated and uncoated sheet metal
- Use of gas or electrical heating, or a combination of both

The thermal printer for lightweight bodywork components



The thermal printing technology first realized and launched by our company allows two or more different temperature zones to be realized in the same blank. The distinct regions are subjected to a selectively focused heat treatment, i.e. application of locally modified time-temperature curves.

This means that besides the hard martensitic areas obtained by conventional press hardening, soft zones can be produced as well. Moreover, our innovative technology can deliver **exceptionally narrow transition areas between the different hardness zones** to satisfy individual requirements.

During subsequent pressing of the blanks distinct hardness levels are thus imparted to the specified areas. This technology gives our customers in the automotive manufacturing and supplier industries numerous new options in the production of safety-relevant body parts.

The use of our thermal printer system enables substantially lighter car bodies to be built, **making vehicles more fuel efficient and eco-friendly**.

Whatever part geometry or temper zone layout you need, **we can build you a custom-designed thermal printer** to perfectly match your schwartz heat treatment system.

In lightweighting today's car bodies, our thermal printer system is a key enabling technology.

Our heat treatment systems are suitable for all aluminum parts in the automotive, aircraft manufacturing, and building construction industries.

Whether it's rolled or pressed products, forgings or castings, we will design and build you the perfect system solution.



Individual heat treatment systems for aluminum

High-efficiency heat treatment equipment for aluminum



Since its establishment in 1984, schwartz GmbH has designed, built and commissioned more than 200 heat treatment systems for aluminum.

All these systems feature highly efficient atmosphere recirculation technology as well as powerful fans with product-specific nozzle systems to ensure fast, effective and uniform heating.

We hold patents on diverse heating systems and their applications. The demand for lightweighting solutions in automotive manufacturing, energy savings and lower CO₂ emissions is driving up the proportion of aluminum parts.

Heat treatment in our equipment complies with current requirements for these components, e.g. SAE Aerospace Material Specifications (SAE AMS 2750) and the CQI-9 Heat Treat System Assessment.

When introducing and implementing the temperature uniformity survey (TUS) and measuring system accuracy tests (SAT), our customers benefit from the many years of experience and ongoing training of our personnel.

So whatever your needs in the fields of homogenizing, annealing, solution heat treatment or artificial ageing of aluminum, **we will design precisely the right equipment for you.**

Our heat treatment systems come with highly efficient atmosphere recirculation technology.

Know-how and unsurpassed quality – from initial advice to starting up a finished system



We provide expert advice and address your individual production needs in planning your new system. Our sales team will be glad to visit your site to discuss all details.

Our exceptionally well-trained engineers and technicians have many years of experience and will leave nothing to chance in designing your equipment.

Relying on their profound expertise, we keep on refining our proven technologies, with our numerous patents clear evidence of our innovativeness.

All systems are fully assembled at our production sites in Simmerath, Aachen and Kunshan. In implementing our high quality standards, we always use a fixed team of specialized personnel, as we do in commissioning the equipment's electrical and automation functions.



Upon completion and prior to delivery, each system is subjected to a hot test involving heating it to the operating temperature. We thus ensure that all components work perfectly and you obtain a fully functional, high-quality installation.

If required, you can conduct pre-shipment acceptance testing together with our specialists to reassure yourself of your system's full functionality.

Upon acceptance, we will disassemble your system and ship it safely to your production site using specialist carriers. On arrival, our experienced staff will be at hand to help integrate the new equipment into your production system and commission it on site.



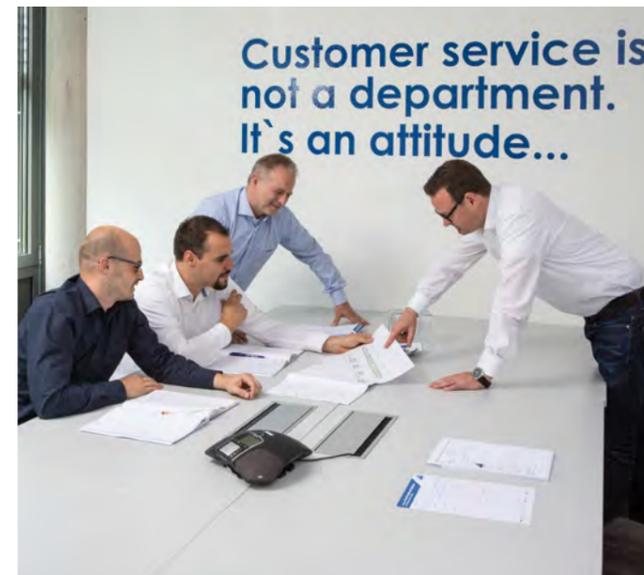
Our exceptionally well-trained engineers and technicians have many years of experience and will leave nothing to chance in designing your system.

Competent service for your schwartz heat treatment system



Our lifecycle-based approach is intended to ensure that your schwartz heat treatment system will deliver unvarying performance at all times. You can rely on us as a competent partner from the date the system is installed in your production line to the end of its service life.

To keep your system up and running, we also offer custom support geared to your needs. Our after-sales service staff is trained for excellence in delivering made-to-measure, plant-specific maintenance plans tailored to your manufacturing cycles.



Based on the experience gathered from over 1,000 heat treatment systems built to date, we set high service standards and keep on improving them – so you enjoy the best possible service for your heat treatment system.

On request, we can also provide production support or train your operators at your site or periodically at custom training programs conducted at our premises.

You can rely on us as a competent partner from the date the system is installed in your production line to the end of its service life.

The schwartz Group – at your service worldwide



- 7 global sites
- 21,000 m² production area
- 3,500 m² office space
- Over 200 employees
- Sales, design, production, installation, customer service, spare parts

schwartz GmbH – Germany



The **schwartz Group's headquarters** is located at Simmerath in North Rhine-Westphalia, Germany, and close to the Belgian and Dutch borders.

This plant has some 4,500 m² of production space dedicated to manufacturing our heat treatment systems.

More than 140 people are currently employed at Simmerath, including specialized teams of engineers and designers who will develop your system.



Our competent service team is there to help around the clock.



Needless to say, we maintain a professional service team you can reach 24 hours a day. Key parts are stocked at our extensive spare parts warehouse. All heat treatment systems (except those destined for the Asia-Pacific region) are fully assembled at our two German manufacturing sites (Simmerath and Aachen) where they undergo hot testing (Factory Acceptance Test) prior to shipment.



Scan the QR code to see our image film.

Hütte GmbH – Germany



Our Hütte subsidiary supplies customized equipment for your specific heat-treatment applications.



Since mid-2016, Hütte has been a wholly owned subsidiary of the schwartz Group and its new Aachen plant has 14,000 m² of production space. Heat treatment systems for press-hardening lines, all aluminum heat treatment equipment, as well as special-purpose equipment are designed, built and hot-tested here prior to shipping.

Our exacting group-wide standards of design and production quality are met just as meticulously in this plant as they are at all other schwartz Group sites.



schwartz HTS – China



Two newly established customer service sites enable us to supply services and spare parts even faster out of Central and Southern China.



To improve our service reach throughout the Asia-Pacific region, schwartz Heat Treatment Systems Asia (Kunshan) Co. Ltd. (commonly known as schwartz HTS) was established as a subsidiary as early as in 2011 at Kunshan near Shanghai, China.

With approx. 2,500 m² of production space we produce and commission our heat treatment systems to German standards in the same quality as at our headquarters site.

Here, too, we maintain a service center and spare parts warehouse where key genuine parts are always stocked.

Since 2015, schwartz HTS has been operating its own sales office in the Chinese capital, Beijing.

In 2017, two more customer service centers were opened at Chongqing and Guangzhou, enabling us to supply services and spare parts even faster out of Central and Southern China.

schwartz, Inc. – USA



Since 2017, we have had a dedicated sales site for the U.S.A., Canada and Mexico.



Since 2012, **schwartz, Inc.** based on Oswego near Chicago, IL (U.S.A.), has been offering fast support and a large number of equipment spare parts as a customer service operation for our customers in the U.S.A., Canada and Mexico.

As of 2017, the site is also handling sales to this region.

Selected references



A growing number of customers all over the world trust our product quality and high standards.

As your dependable partner for heat treatment systems, we will fully support you in providing just the right equipment and service you need – now and in the future.

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