



HARDENING MACHINES

Induction hardening. Customised. Reliable.

THE FOUNDATIONS OF SHARED SUCCESS

Maschinenfabrik ALFING Kessler GmbH



Our machines and systems for inductive hardening and heating deliver reliable performance, both in our own production department and at many customer sites around the world. Whether the focus is on speed and output or individual design and flexibility, we always strive to provide our customers with an optimum concept tailored to the application in question.

Our cutting-edge company offers top-level expertise in the forging, heat treatment, machining and assembly of precision components up to 8 m in length. Our global activities cover a whole host of sectors in which we serve as a leader for technology and innovation.



Decades in the making

1911

Founded in Aalen-Wasseralfingen back in 1911, Maschinenfabrik ALFING Kessler GmbH can draw on 100-plus years of experience, expertise and customer satisfaction.

As an innovative and reliable partner in the field of heat treatment since 1952, we are always keen to share our experience and knowledge with our customers. We produce our fantastically versatile, high-performance and innovative induction hardening machines at our site in Germany and supply these to our customers around the world.



BROAD EXPERTISE FROM A SINGLE SOURCE

Our core competencies



ENGINEERING

- // Simultaneous engineering
- // Production
- // Research and development



HARDENING MACHINES

- // Crankshafts
- // Powertrain
- // Special applications



INDUCTORS

- // Additive manufacturing
- // Conventional manufacturing



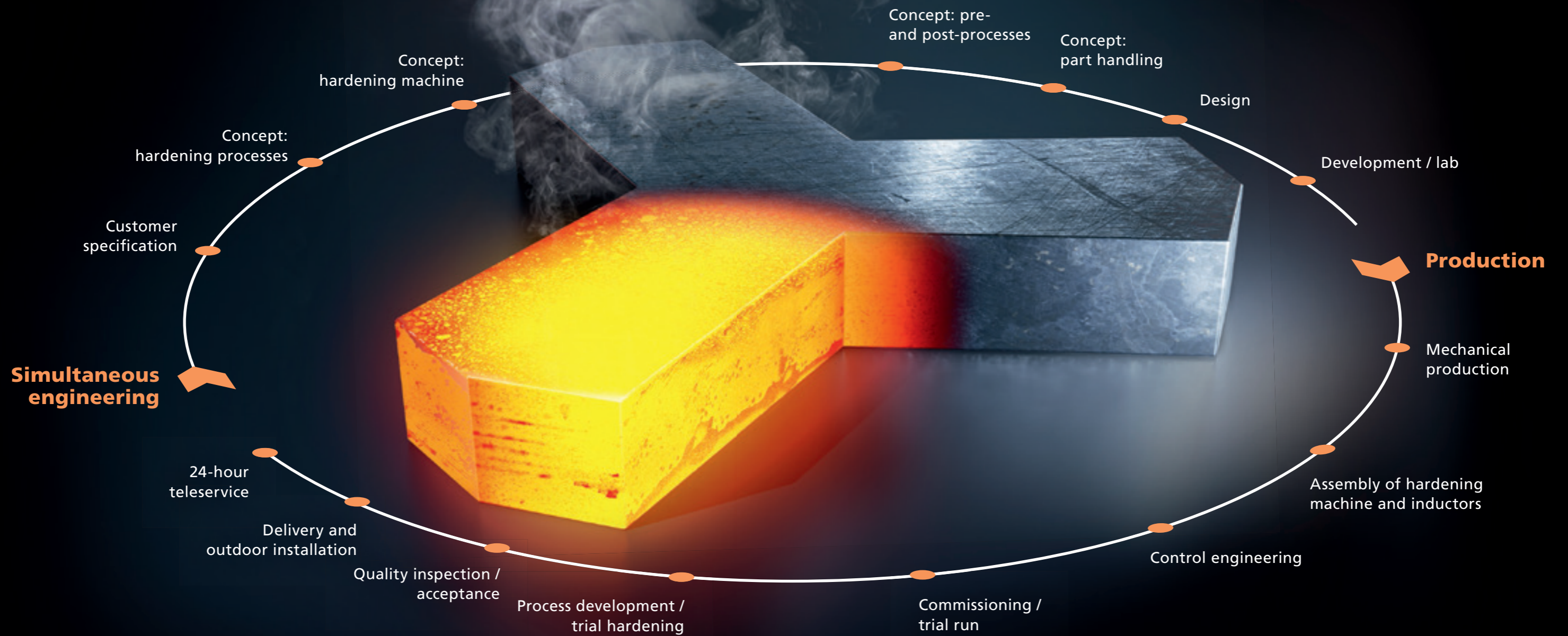
SERVICE

- // After-sales service
- // Spare parts
- // Process development

PATH TO PERFECTION

Our service portfolio

Our customers benefit from dependable expert support in all processes relating to hardening, which ensures reliability for years to come. We uniquely combine practical knowledge of precision steel component manufacturing with our proven technologies and methods: these span the entire hardening process from analysis of the specification through to up- and downstream process steps and global support.



WELL-EQUIPPED

Our product range

For all high-precision steel components

We offer the right hardening machines and hardening processes to meet demands in a wide range of applications. Customer requests and special requirements are analysed and implemented in a way that ensures maximum satisfaction.

Our product range also includes tailored machine development, lab tests and trial hardening on dedicated lab machines.

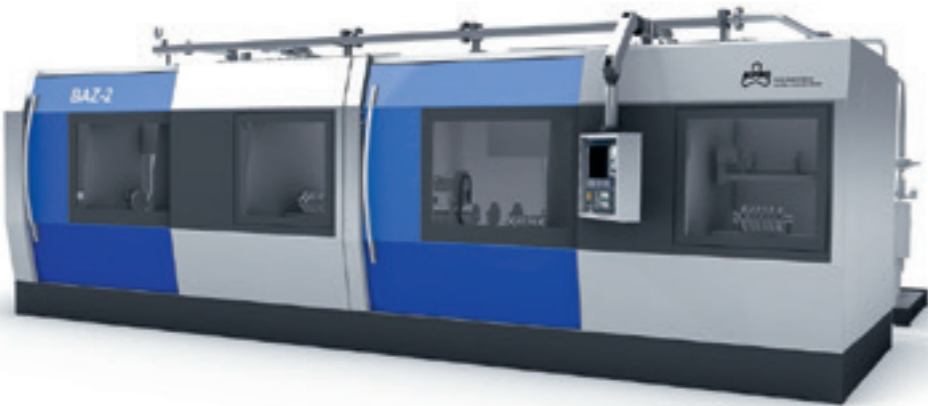



Hardening machines for automotive crankshafts

Our BAZ-2 machine types with 1 or 2 stations and our FAST-NG machine type are optimum solutions for crankshafts up to 700 mm. Specially crafted to fulfil the requirements of the automotive industry, they represent the ideal solution for crankshafts in cars and other vehicles.



BAZ-2



 BAZ-2 (1-station/ 2-station) **Technical data**

 BAZ-2 (1-station) **Video**

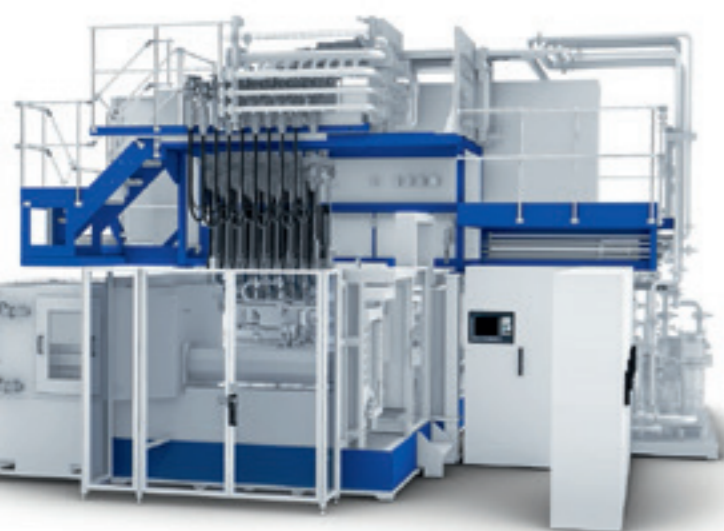
 BAZ-2 (2-station) **Video**

FAST-NG

 FAST-NG **Technical data**

 FAST-NG **Video**

FLEX 1.5 and 4.0



Hardening machines for cars, buses, agriculture and large crankshafts

Our FLEX machine series delivers maximum flexibility in the processing of a wide variety of crankshaft types and variants. While our FLEX 1.5 machine type covers the range up to 1.5 m, customers in the large crankshaft sector should turn to our FLEX 4.0 – which handles crankshafts measuring up to 4.5 m. Tailored solutions and options ensure that these machine types can be perfectly attuned to the specific customer requirements.

 FLEX 1.5 **Technical data**

 FLEX 4.0 **Technical data**

 FLEX 1.5 **Video**

Hardening machines for powertrain parts

Our VHM and UM machine types form the ideal solution for just about all applications in the powertrain sector. Scan hardening and single shot hardening enable adjustments to suit the respective hardening task. With the help of additional modules, the modular machine structure can easily be adapted in line with the component- or production-specific requirements.



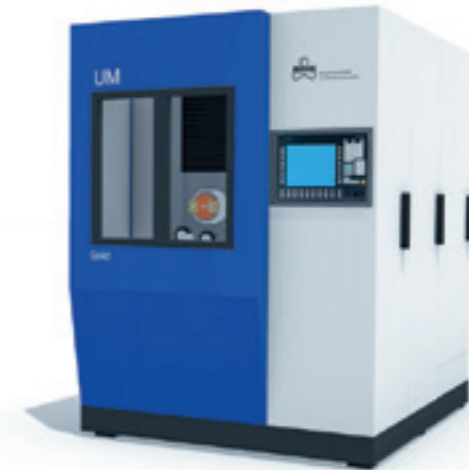
VHM

 VHM **Technical data**

 VHM **Video**

UM

 UM **Technical data**



We are happy to discuss your enquiry and any questions regarding our products. Feel free to get in touch by phone or via email.

Email: ac@alfing-corp.com
Phone: **+1-734-414-5884**



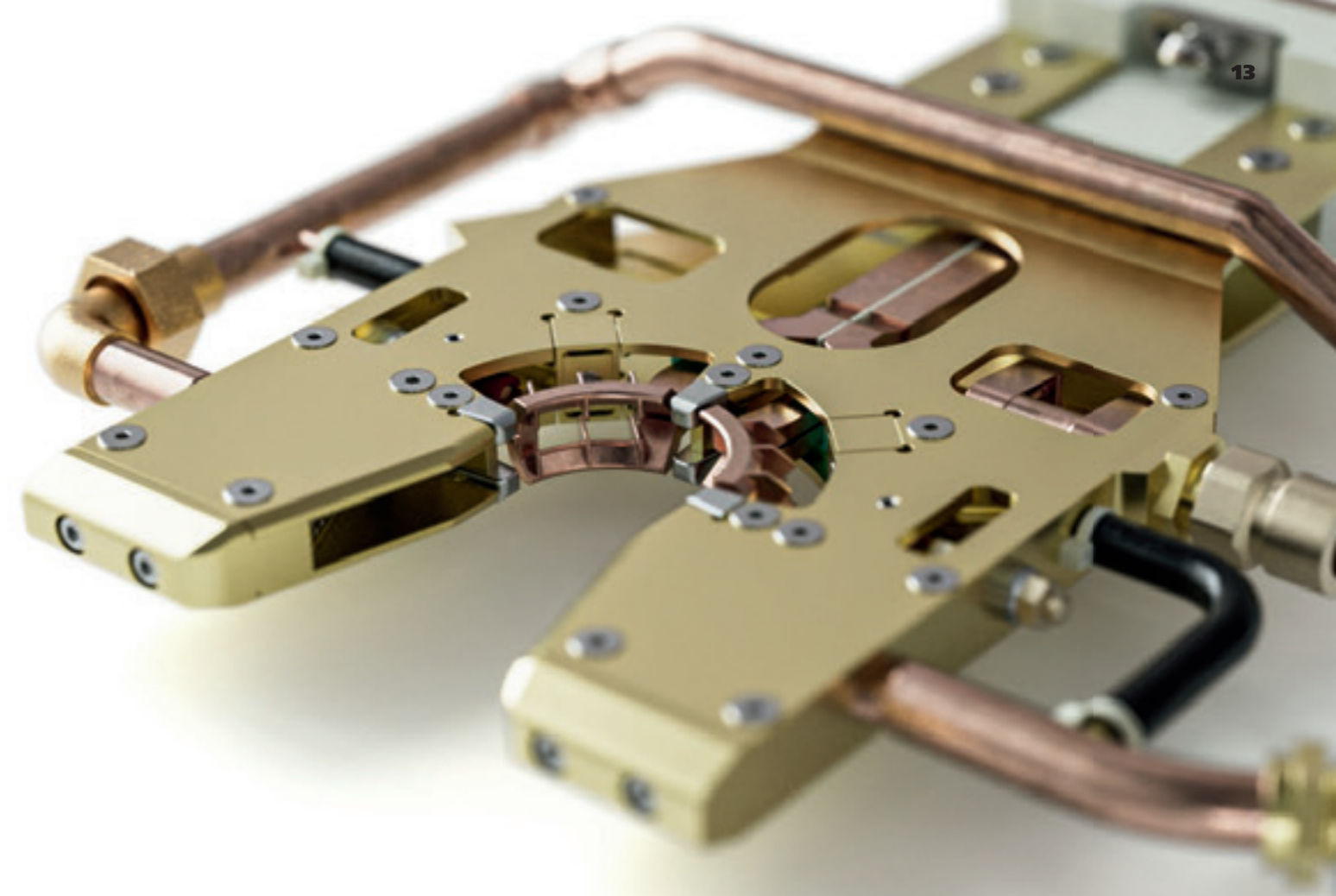
THE HEART OF EVERY HARDENING MACHINE

Our inductors

A hardening machine is only as good as the inductors that are used as the core tool. This is why we develop and manufacture our inductors in-house. Our experienced staff produce all inductors with the help of top-class materials and their own excellent craftsmanship. From the manufacturing of the components for the heating coil and housing through to the assembly of the finished system, Alfing does it all.

Additive manufacturing via 3D printing

In our 3D technology centre, we manufacture inductors using selective laser melting. Unlike conventional manufacturing processes, laser melting is a formless production method that offers significant freedom in terms of geometry. The heating coils are printed as one unit and deliver outstanding durability.



The expert touch

Quality craftsmanship is crucial at every stage in the production of individual inductors.

With our staff drawing on decades of experience in inductor manufacturing, Alfing inductors are guaranteed to be precise, powerful and durable.

Extra services for inductors

- ▶ Inductor database
- ▶ RFID inductor detection
- ▶ Tools management



We are happy to discuss your enquiry and any questions regarding our inductors.

Email: ac@alfing-corp.com
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ALWAYS UP TO DATE

Our additional modules

Additional modules for our hardening machines

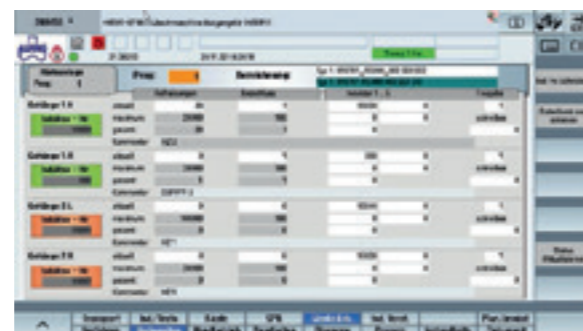
Our expansion modules enable us to provide the optimum solution for your hardening machine.

- › Energy measuring equipment (EME)
- › Total indicated runout (TIR)
- › Component handling (feed-in, feed-out, indexing table, etc.)
- › Component identification (data matrix, etc.)
- › Loader interface
- › Water management (Fluidcare)
- › Inductor management
- › Inductor recognition (RFID technology)
- › Component drying
- › Production data acquisition and MES interfaces
- › Output of CSV/JSON files for the energy measurements
- › Manual control panel (HT8)
- › Inductor magazine
- › Automatic suspension adjustment

Conversion and expansion

The sophisticated design of Alfing hardening machines offers a whole host of options for conversion and expansion. We provide the ideal solution based on the specific challenge facing our customers.

- › Expansion of component portfolio
- › Automation/workpiece handling
- › Integration of additional modules
- › Machine relocation
- › Retrofits
- › Control upgrades



WHEREVER YOU ARE

Our services

Reliable machines are the bedrock of positive results in production, which is why we offer our customers an exhaustive range of services. With many of our hardening machines in operation around the clock, our customers benefit from swift support and preventive maintenance concepts to secure a high level of machine availability.



AFTER-SALES SERVICE

Support

Our global network supports customers in the event that service is required. As well as on-site assignments, we provide assistance via teleservice, video sessions, phone and email to reduce machine downtime. Regular preventive maintenance helps with identifying deviations in machine function and ensuring availability.

Service agreement

Our service agreements enable our customers to organise support and costs so as to be fully prepared for potential service cases before they happen. Spare parts provision, deployment time, accessibility and the applicable conditions can all be agreed in advance.

Spare parts

We keep a stock of critical machine-specific spare parts for support at short notice in the event of machine faults.

We also work with our customers to develop spare parts recommendations and thus promote efficient storage.

Tools management

Our tool management system for inductors offers the following:

- › Tools management
- › Availability
- › Automated supply process

Training

Our training modules in different languages provide customers with the knowledge they need for confident operation of our hardening machines.

Our customer service team is happy to discuss your enquiry.

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