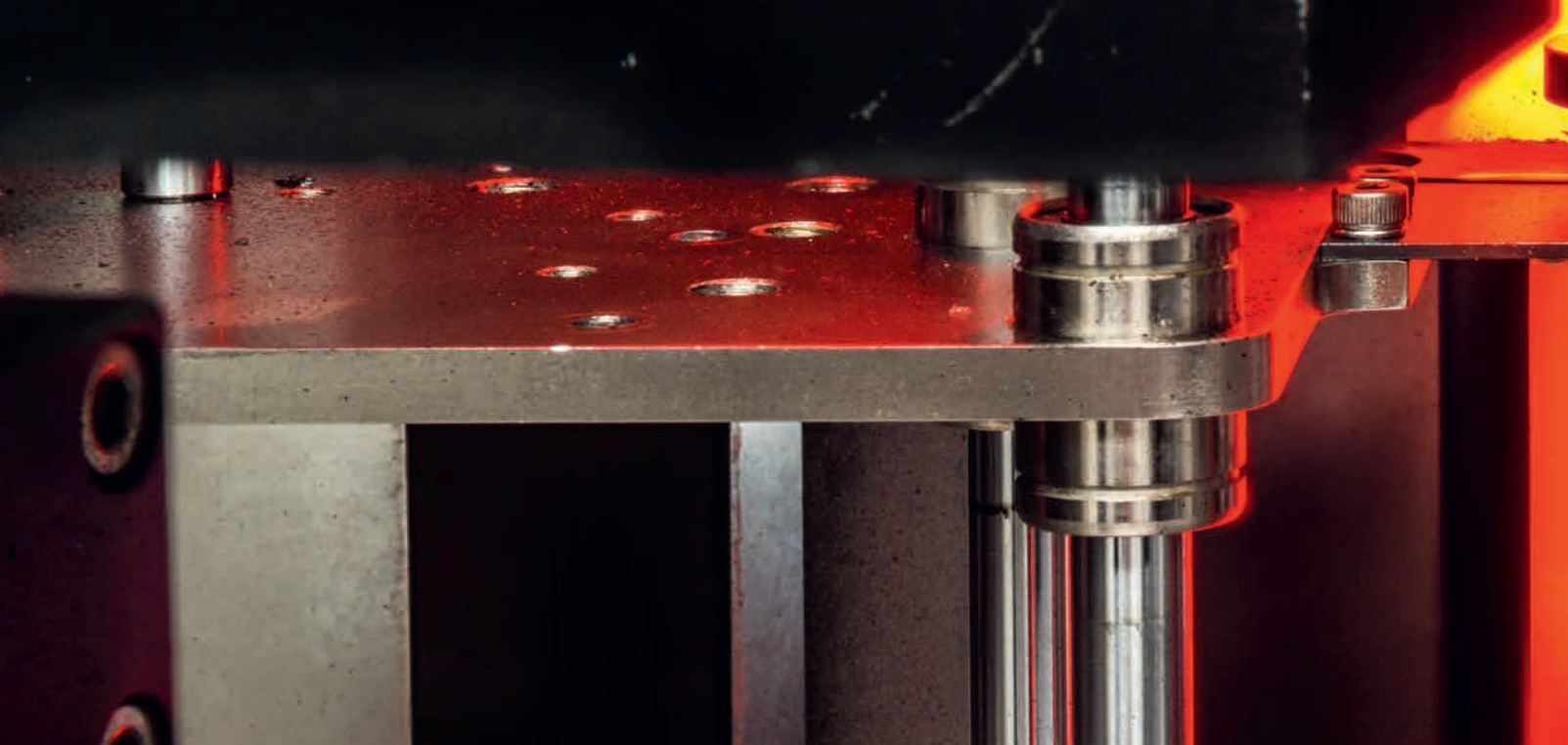


High-Quality solutions for fastening technology



KOHLHAGE
Fasteners



High-Quality solutions for fastening technology

From the very beginning, dealing with fasteners was a central part of the **KOHLHAGE** business. The focus was on the sale of standard parts. Many trade contacts from that time still bear witness to this today. However, since 2007 **KOHLHAGE** Fasteners has experienced a fast-paced evolution. Since then **KOHLHAGE** Fasteners has become a sought-after specialist for complex tasks in the field of fastening technology with a special focus on application technology consulting.

KOHLHAGE engineers and technicians specialized in screw technology develop individual solutions together with customers from different industries whenever complex and sometimes difficult to solve problems in fastening technology are involved. The **KOHLHAGE** specialists benefit from the fact that they are familiar with all common production processes. They can recommend the most favourable and efficient production variant to the customer in addition to the solution. **KOHLHAGE** customers appreciate this.

Turned parts



Welding nuts, welding screws



Stamped parts



Cold formed parts



Inserts

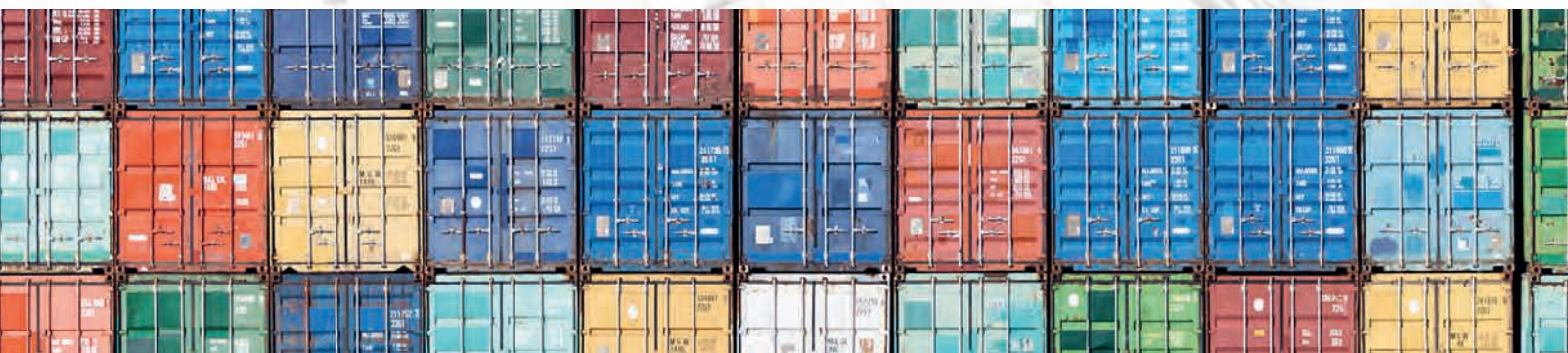




For decades **KOHLHAGE** has been committed to worldwide purchasing. By having long-term business relationships with suppliers in Europe and overseas, it is always possible to select the optimal partner for the manufacture of products.

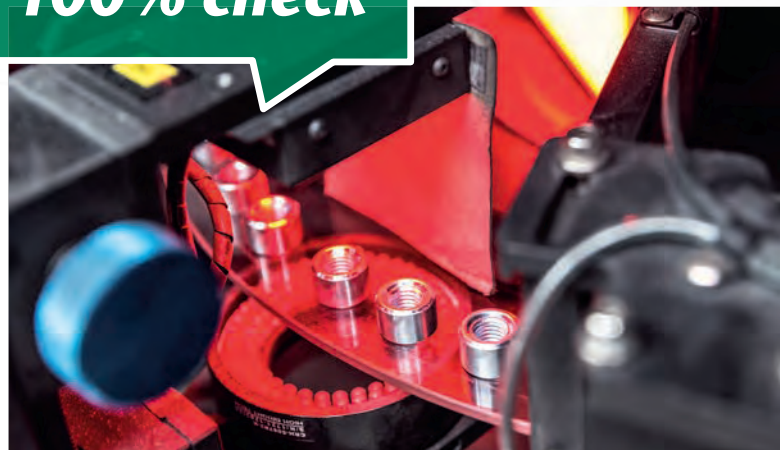
Global sourcing

With its own team in Asia and the distinctive technical know-how **KOHLHAGE** can take on even the most complex challenges. For example, products subject to documentation for crash-relevant areas have already been brought to series production readiness several times and are delivered with a 0 ppm quota on a long-term basis.



The 0-fault target is a particular challenge, especially for mass-produced parts such as nozzles and connecting elements. **KOHLHAGE** is aware of this and has invested heavily in high performance sorting machines. Almost all internal and external geometries and all drives can be inspected at a speed of more than 500 parts per minute – lying on the glass plate or hanging on the round plate.

100% check





Application engineering consulting



Well-trained employees are the basis for the successful implementation of customer projects. At **KOHLHAGE** a large number of engineers, screwdriving and welding engineers, bachelor and master graduates and technicians form the backbone of the company. Application engineering consulting from “tightening torque” to “tensile test” is the strength of **KOHLHAGE**. Customers benefit from optimal manufacturing geometries and processes and thus from favourable conditions. Customers benefit from optimal production geometries and processes and thus favourable conditions.

Turning



Complex + flexible = unbeatable

Turning technology is always unbeatable when products have to be manufactured with high quality standards, clean surfaces and tight tolerances. Thanks to modern multi-spindle technology, even high quantities can be offered at economic conditions. **KOHLHAGE** Fasteners relies on turning technology in series production for special inserts or complex adjustment spindles for car seats. In addition, prototypes are often “turned” in order to be able to react quickly and flexibly to new developments. From the CNC single-spindle to the CNC eight-spindle machine – together with **KOHLHAGE** partners all common manufacturing processes within turning technology can be offered. **KOHLHAGE** Fasteners always recommends the most favorable process in terms of geometry and quantities.



Punching



Optimal for large series production

Due to generally high tool costs, punching is the most economical process, especially for large quantities. A large number of complex cutting and forming processes can be carried out with progressive tools.

At the same time, modern high-performance auto-machines are able to run 500 strokes per minute and more, depending on the complexity of the parts and material thickness.



„Like precision mechanics with boxing gloves!“

Cold forming



Cold forming means that sections of wire are formed under pressure in two- or multi-stage tools without the addition of heat. The advantage of this process is the high production speed and, above all, the optimal utilization of material. While process-related material losses of up to 50% are not uncommon in turning and punching, the loss in cold forming is usually only 10 – 15%.

The progressive development of modern cold forming technologies leads to systems which are so precise that simple to medium-complex turned parts can be produced much more cost-effectively by cold forming.

KOHLHAGE helps to replace such turned parts by cold formed parts and thus creates important financial margins on the customer's side.



1929

Founded as a trading company by Ernst Kohlhage

1950

Friedrich-Wilhelm Kohlhage takes over the management of the company

1953

KOHLHAGE becomes a turning shop with its own production facilities

1970

First production in Neuenrade Küntrop

1986

Division into trade (KOHLHAGE & Co. KG) and production (KOHLHAGE Verbindungstechnik GmbH)

The KOHLHAGE Group

Products for Automotive & Co.

KOHLHAGE is a medium-sized, owner-managed company, which has been successful in the market for more than 90 years and can build on this wealth of experience. More than 180 well-trained and committed employees make **KOHLHAGE** one of the first choices when it comes to finding solutions for demanding tasks in metal processing. Today **KOHLHAGE**'s headquarters is still in Neuenrade. Three of the five sites are also located there. But **KOHLHAGE** operates worldwide. With the production site in Kunshan (China) founded in 2016, the purchasing office in Taiwan and the logistic and warehouse site in Mexico, the owner-managed company from the Sauerland region is a global player.

The production focus within the **KOHLHAGE** Group is still in the automotive sector. However, market developments in recent years have led to the re-organisation and repositioning of the **KOHLHAGE** Group as well. For example, the foreseeable changes with regard to e-mobility have led to the founding of **KOHLHAGE** E-Tech. However other companies in the group also serve other markets today, from the plastics industry to special machine construction.

Safety related assemblies



www.kohlhage.de

KOHLHAGE Automotive

From the bent tube to the complex assembly

In the past, perhaps 20 years ago, **KOHLHAGE** was known for its ability to bend pipes. In the course of time **KOHLHAGE** engineers refined this production know-how continuously and well-known car manufacturers have become aware of the experts from Neuenrade. Today **KOHLHAGE** Automotive is known for its high level of consulting skills, speed in decision-making and flexibility in implementation. Here, **KOHLHAGE** technicians support the developer on the customer side in the run-up to a series product. Thanks to their experience, they can help to design the desired geometries with process reliability at an early stage in the project.

Fluid & oil tubes





1997

Complete move to Neuenrade Küntrop

2012

Renaming to KOHLHAGE Automotive GmbH & Co. KG and KOHLHAGE Fasteners GmbH & Co. KG

2018

Foundation of KOHLHAGE E-Tech GmbH

2020

Maximilian Schreiber (member of the Kohlhage family) joins the management team

2022

KOHLHAGE E-Tech produces stretch-bent parts for automotive lightweight construction

KOHLHAGE *E-Tech*

Solutions for e-mobility

Thanks to its experience in the reliable production of complex assemblies in series production, **KOHLHAGE E-Tech** can develop viable solutions for electrically powered vehicles. Core products are structural components and individually developed unit carriers to accommodate electric motors and their attachments.



Structural components

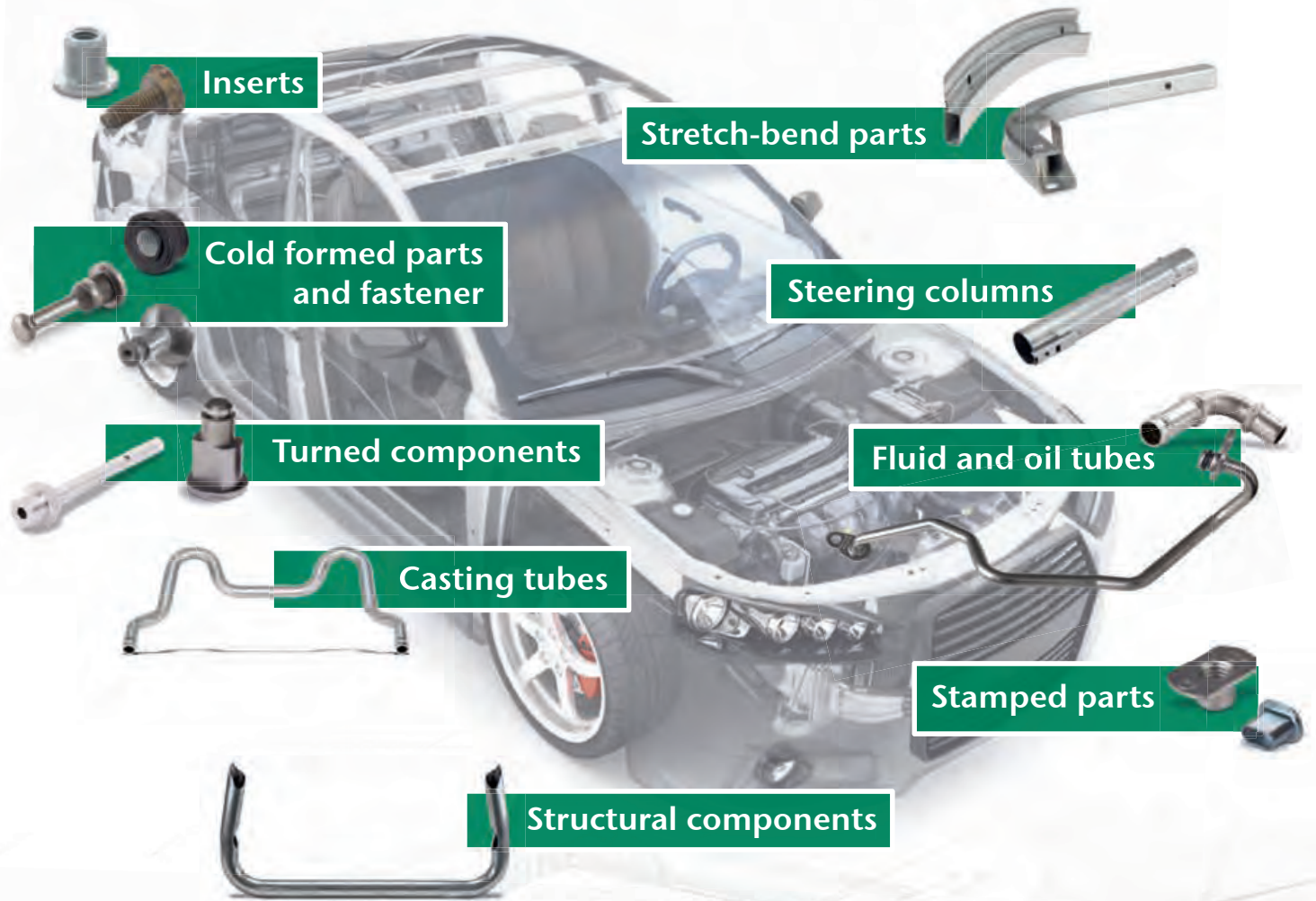


Stretch bending parts



Aggregate carrier

KOHLHAGE



Functional assemblies
made of tube

KOHLHAGE
Automotive

Solutions for
e-mobility

KOHLHAGE
E-Tech

High-Quality solutions
for fastening technology

KOHLHAGE
Fasteners

Standard parts:
Excellence in quality and service

KOHLHAGE
Fasteners

KOHLHAGE Fasteners GmbH & Co. KG

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