KÄCHELE
VIBRASTOP

The rubber team with the high-tech spleen

Elastomer Technology

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Welcome to Kächele.

The rubber team with the high-tech spleen.

Kächele – a Swabian company with a Swabian name, and this one stands for a lot of positive Swabian attributes: inventiveness, perfection, accuracy, reliability and calculability. These are all characteristics that are also reflected in the products manufactured by Kächele. They have one thing in common: the rubber.

You cannot really imagine thousands and thousands of products without rubber because rubber plays important roles: bearing, damping, springy, insulating and sometimes even decorative ones. But rubber does not always mean the same. The rubber that reduces vibrations in the gear bearing differs considerably from the sealing one of the communications satellite or from the heat-resistant rubber in the downhole pump for the mineral oil transportation.

The technology of combining rubber with other materials is a specialty of Kächele. Like this compounds of rubber-to-metal or rubber-to-synthetic material are produced for all industrial sectors. In the meantime Kächele has more than 3,500 single products in its portfolio. From the small rubber-to-aluminium component in the brake aggregate for the car industry to stators with up to 6 metres in length for progressing cavity pumps for the chemical industry. But also pure moulded rubber components such as sealing washers are developed and produced by Kächele.

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Experts work for experts

To develop the optimum rubber product for each field of application is an interlocked process.

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1 The customer is involved in most of the product designs. Even if he only defines his requirements to Kächele's team of experts. To meet with the customer's demands is considered to be the highest target by Kächele. From the first conversation onwards up to the After-Sales Service the customer feels the high professional competence because the company in Weilheim has been taking up all challenges for almost eight decades now. These decades have been formative for the company.

The suitable elastomer compounds are developed according to the conditions of application. About 1,500 different recipes are available for this purpose. They are combined out of 18 principal elastomers, made of natural and synthetic sorts of caoutchouc that are bought on the world market. In addition, there are scores of further components. Therefore the customer can be rest assured that he will find at Kächele the suitable recipe for nearly every purpose of application. If this is not the case, new recipes will be developed. A laboratory blender and a laboratory mill are available for it. In this development stage the components of new elastomers are combined, afterwards the emerged compounds are processed and tested for the customers' requirements. So quality assurance already starts with the development of compounds and means for Kächele flawless production from the development onwards up to the delivery.

The data acquisition already begins with the construction. From there the data get online to the precision tool manufacture. Kächele manufactures the tools itself and exclusively in its own house. Thus the company has not only the quality under control but also the dates in particular. When the series compound is produced, the particular components are proportioned computer-controlled. The dressing of the rubber compound takes place in the mixing apparatus.

The conditions for a durable rubber-to-metal connection are created when the metal parts are prepared. From the first production workpiece to the last one a constant, reproducible quality is guaranteed by a process control system. The industrial scale manufacture is continuously automatized, from the adhesive agent to the final inspection. This means flawless quality and a decisive saving for the customer.

It goes without saying that Kächele's team thinks and acts customer-oriented from the development over the production to the After-Sales Service.

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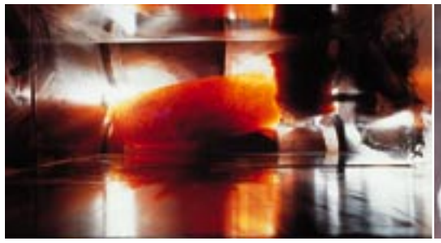

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Automotive Industry

A car without rubber?
Inconceivable!

Kächele produces a lot of different moulded parts, rubber-to-metal connections or rubber-to-synthetic material connections for automobiles, trucks and buses.

Housing seal

Steering damper

Rubber-metal buffer for truck sleeper berth

Sensor coupling

Differential bearing

Steering gear support

among other things, sealings, covering collars, joint sealings, tubes, valves, folded bellows, isolation collars, sparking circuit plugs, distributor caps, cables and cable servings, cable sleeves, binders, water protective caps, rubber bearings for mirrors and lamps. Kächele's rubber moulded articles and its rubber-to-metal connections normally last longer than the vehicles themselves.

Without rubber today's vehicle technology would not be conceivable. Kächele VIBRASTOP products are found in nearly every vehicle nowadays. Rubber-to-metal connections have been used for decades to support motors, steering and axle systems. At the same time elastomers are used which must show mechanical, thermal or chemical resistance according to their application. Within the business scope of the automotive industry, Kächele manufactures,

Industrial Applications

Kächele, the partner of the industry

Products made of elastomers are used in nearly all sectors of the industry. Kächele's development engineers find solutions for all customer requirements.

Spring cap

Sealing membrane for electric tools

Rubber-metal buffer

Turning joint chain links with rubber overlay for goods that slip easily

Vibration damping

Kächele presents convincing solutions against vibrations under the brand of VIBRASTOP. The transfer of vibrations by means of rubber-to-metal connections and the noise are considerably reduced when motors, gears or transformers are used.

Technology of printing machines

Often extremely thin rubber overlays of elastomer compounds that are highly resistant to abrasion are vulcanised on grabs and doctor blades with particular methods.

The construction industry

Kächele delivers, among other things, joint sealings, collars, tube sleeves and folded bellows, as well as VIBRASTOP rubber-to-metal connections for the vibration damping.

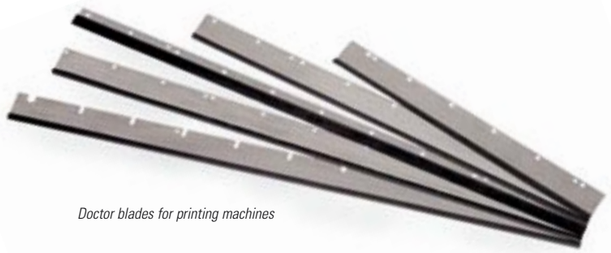
Motive power engineering

Kächele's driving elements are used in all movable driving parts of motors and gears. They prevent the transfer of vibrations to housing, car body or boat body to a great extent.

Snappy couplings

Seat rings for fittings

Vibration element for chair lift



Doctor blades for printing machines

Electronics and electrical technology

In these scopes of work rubber is used in addition as insulating and sealing material. Products such as sparking circuit plugs, angles, switch borders, cable sleeves, sealing collars, transformer bearings, switch protective caps and many other articles are offered by Kächele in extremely heat-resisting and nonconducting qualities.

Products manufactured by Kächele in white goods

Rubber moulded articles and VIBRASTOP rubber-to-metal connections play an important role in washing machines and in spin driers, in dishwashers and in refrigerators. Here, too, resistance to heat and alkaline, as well as ageing stability are the conditions for a long life.

Pump Technology

Kächele has been supplying the leading pump manufacturers worldwide with stators and rotors for over 40 years now.

Drilling motor

Hollow rotors

Plaster stators

Industrial stators

The progressing cavity pump

An ingenious but nevertheless a very simple pump design. The operational principle is based on two components, the stator and the rotor. Due to the eccentric slewing motion of the rotor the content of the delivery chambers is transported. The rubber coating seals the delivery chambers against each other. The lining up of several chambers enables very high pressures. The progressing cavity pump or PCP is mainly used for the transportation of consistent media. Different delivery capacities are attainable through variation of the geometry and the numbers of revolutions. The used materials and the geometries are adjusted carefully dependent on the operating conditions such as temperature, solids content and viscosity, as well as chemical and mechanical characteristic features of the delivery medium.

EVENWALL® ROTOR AND STATOR

Kächele is leading in this technology. Therefore many developments and innovations from Weilheim are employed worldwide. The quality of the products is accurately tested and documented with expensive measuring systems and test procedures before they leave the works.

The EvenWall® technology developed by Kächele increases the efficiency of progressing cavity pumps considerably. EvenWall® enables a higher pressure with the same size or a smaller size with the same pressure. This results in material savings, a higher service life and the superiority of the EvenWall® principle in technological and economical regard. Moreover, the uniform wall thickness of the rubber reduces the heat build-up and enables a high accuracy of measurements over a wide temperature range. Moreover, the uniform wall thickness of the rubber reduces the heat build-up and enables a high accuracy of measurements over a wide temperature range. For the use with very heavy temperature fluctuations the rubber surface of the stator can be provided with an additional groove structure. This development of Kächele, the latest one, is patented worldwide.

Drilling motors

Stator and rotor result in a hydraulic motor by the inversion of the principle of efficiency (the pressure of the delivery flow produces a slewing motion). The rotor is connected with a special drilling head. In the last years the Downhole Drilling Motors got their way to an economical and effective system in the mineral oil technology and in the gas transportation technology. The EvenWall® MUD Drilling Motors have a much higher drilling capacity.

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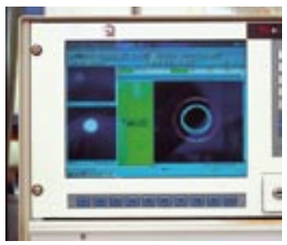

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Rubber compounds

An optimum manufacturing process with rubber compounds produced by Kächele.

Kächele produces rubber compounds on the basis of all known elastomers.

Compound development

The optimal compound is developed and extensively tested for each job profile.

Mixing process

All rubber compounds are automatically measured related to the charges. Down to each individual gramme. The proof of application of the raw materials is continuously guaranteed. The preparation of the compounds in the pug-mill and on the rollers is made process-controlled. This always guarantees constant quality. All process dates are collected and recorded.

Compound release

Each compound charge passes through a specific release process. Quality assurance from the raw material up to the finished compound.

Support

Kächele places the charge dates of kinetic reaction for the process regulation at your manufacturing machine at your disposal. Kächele's team of experts stands by you and acts as your adviser because the processing of rubber is a complex field. Kächele delivers "Just in Time" with short times of delivery. Satisfaction of the customer means for Kächele: our customers are successful with their customers.

Raw materials

Support of major components and automatic measuring

Pugmill

Roll mill

Quality

From the first conversation to the delivery –
A continuous quality chain

Products made by Kächele on their way to the customers.

Once the term “quality” meant to comply strictly with the given specifications. Today it means to meet with the customers’ requirements and to generate the customers’ satisfaction. Therefore quality means for Kächele to dedicate itself totally to the customer, to understand his demands, to offer him useful solutions and finally even to be actively involved in ensuring his success on the market.

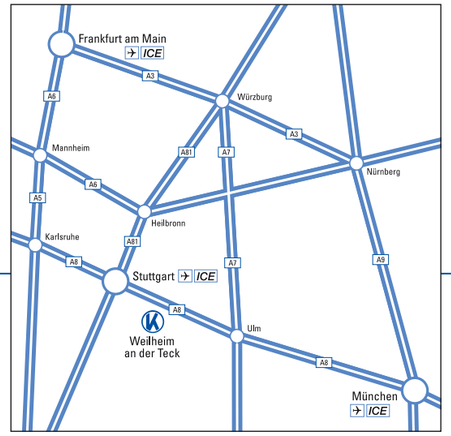
Each step in the lifespan of an ultimate product is decisive for its success on the market, whether it concerns a vehicle, a printing machine or a pump system. Therefore quality assurance has to be made completely from the development over the production up to the application. But as many particular components only make up an ultimate product, a manufacturer must count on his suppliers. With Kächele the manufacturer can be absolutely sure and may confidently speak of TQM (Total Quality Management). The longstanding customers of the Swabian company have the highest demands of all worldwide. Therefore Kächele feels obliged to think extremely of the quality.

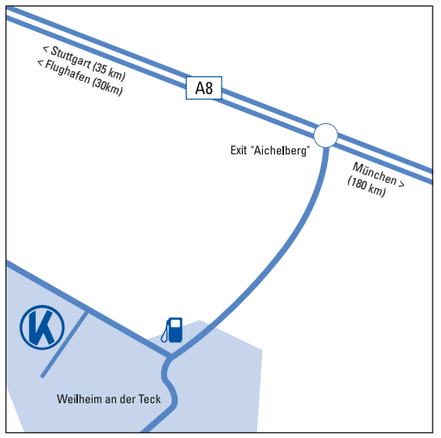
This way of thinking totally of the quality is caused by the perception of Kächele that quality is not only tested but especially produced. The proof of a quality system is furnished in all fields of the company by different certifications. All Kächele’s team is involved in optimising the quality and the team is highly motivated and trained.


CERTIFICATE


CERTIFICATE

Certified quality





Exit A8 Aichelberg, then turn right up to the town entrance of Weilheim, at the petrol station turn right in the direction of Kirchheim/Teck, after approx. 500 m turn left (Kächele company sign).

The Kächele parent company is domiciled in Weilheim at the foot of the Swabian Alb. The company’s history spans back to 1932, when Wilhelm Kächele founded a factory for technical rubber products. The company grew to become a leading specialist in the field of moulded rubber components and rubber-to-metal connections.

A further production plant is located in Warmensteinach in Bavaria. Furthermore the Kächele Group includes the company Flexix in Northern Spain. Each of these locations specializes in particular products.

If you have questions, please write us or just give us a call.