



Lubrication is our world

Special knowledge



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# Your requirements are what drives us

What we regard as impressive new technological achievements today may be standard equipment tomorrow. In the automotive industry, developments happen at a fast pace. The cars of the future are going to be safer, more eco-friendly and more comfortable.

One component that plays a major role in the success of any new car development is the lubricant! While it is an inconspicuous element that remains invisible to the car's occupants, it nevertheless has a significant impact. As an automotive manufacturer or component supplier, you have to be sure any lubricant used fulfills your requirements – over the entire lifespan of the vehicle. Even the remotest risk that might eventually lead to a recall campaign, with all its financial consequences and damage to your image, must be avoided at all cost. Therefore it is vital to include speciality lubricant selection early on in the development stage.

As a manufacturer of speciality lubricants, we get a close-up view of your industry every day. Our ongoing dialogue with industry groups and suppliers allows us to understand what your requirements are. No matter if tried and tested components are to be lubricated, or if thoroughly new parts are being designed – our experts offer consulting and partnership for your developments. Klüber is available to you around the globe.

Our team of highly qualified experts draws on the experience gained through the company's evolution over more than 75 years. With a portfolio of greases, sintered bearing oils, bonded coatings and assembly pastes we can support you, either by underpinning achievements made so far, or by meeting future requirements and fostering innovation and change. No matter what kind of challenge you have in store for us, we will be happy to face it. We will offer a solution that is tailor-made to your ideas and specifications – it might be a product with a long proven track record or a special development that was put through its paces on test rigs adjusted to your specific requirements.



# The right solution for every requirement

Whether C.V. joints or starter motors, central locking systems or sun roofs – today no car component will be exempt from efforts to optimise its friction behaviour. The range of requirements to be met has become much more extensive: dynamic cars consuming less energy, the demand for comfortable driving and higher safety, stricter emission laws – and all that at a minimal cost. Specialists from our chemical and tribological departments ascertain a perfect match between the lubricant and your requirements. Our focus is always on an optimised cost-benefit ratio for your application, no matter for which component.





## The right lubricant for every component or module

Klüber develops, produces and delivers lubricants for, e.g.

- · brake systems
- · steering systems
- chassis systems
- C.V. joints
- · drive units
- gear shifts and clutches
- electrical equipment
- controls
- locking systems
- window lifters
- roof systems
- seats and safety belts
- weatherstrips

## The right answer to any challenge

Lubricants for use in vehicles have to meet wide-ranging requirements:

- good antiwear and anticorrosive effect
- good sealing and adhesive properties
- · long service life
- resistance to wide range of temperatures
- optimised friction coefficient
- compatibility with plastics and sealing materials
- good resistance to ambient media
- · acoustic and haptic damping
- · neutrality in odour
- eco-friendliness
- no health risk
- long-term availability worldwide

# Ensuring high quality and safety from the start

## **Development partnership and competent consulting**

Klüber contributes to many work groups and committees, e.g. the Association of German Car Manufacturers, the German Society for Tribology, the European Lubricating Grease Institute, the Reach Implementation Project or the German Federation of the Chemical Industry. Consequently, Klüber is involved in all decision-making and development processes at an early stage where lubricants for the automotive industry are concerned. All our activities are therefore guided by long-term perspectives, which in turn benefits our customers.

By undergoing various certification processes – e.g. according to ISO TS 16949, ISO 9001, ISO 14001 or EMAS – we ensure a consistently high level of quality and enhance the quality awareness among our employees. Through cooperative efforts and projects with universities and companies in related industries, as for example the plastics industry, we are able to respond to future developments and trends at an early stage.

#### A test bay that is unmatched worldwide

We invest heavily in terms of research, development and testing in order to produce automotive lubricants that meet stringent industry requirements. For this purpose, we have over 100 test rigs in place, many of which are Klüber developments. These test rigs serve as platforms to simulate the conditions our products are going to be exposed to in practice.

In all of our development activities we attach utmost importance to a close cooperation with the automotive manufacturers and their suppliers. Whenever necessary, we adjust our test rigs to specific customer requirements. We know the importance placed upon test results showing the lubricant meets or, even better, exceeds the actual requirements of the application.

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# **Our customers – our products**

## Approvals by our customers

Our products have long proven extremely successful in the automotive industry. This is backed by the large number of approvals our customers have issued for speciality lubricants made by Klüber. We will be pleased to consult you on this subject – just contact us!

Bosch	48
Volkswagen	30
General Motors	11
Ford	14
Daimler	14
Porsche	8
BMW	7
PSA	7
FIAT	5

## **Our products**

The average car has in the region of 250 friction points each with different requirements when it comes to lubrication. Therefore, suitable solutions must be provided for each individual application.

Klüber has lubricants for very low or very high temperatures, lubricants that are compatible with plastics, lubricants with a very good haptic or acoustic damping effect, lubricants offering excellent corrosion protection... in short: Klüber can offer a special lubricant for any application. If it does not yet exist, we'll develop it.

Our engineers will be pleased to support you in determining which of our products best fits your needs.





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## We are where you are: Klüber Lubrication – the world market leader in speciality lubricants

- subsidiaries in over 30 countries
- more than 1 700 staff
- products available worldwide

Klüber Lubrication offers expert tribological solutions. Through our worldwide presence, we meet customers needs reliably and on time. We supply tailor-made speciality lubricants to customers from nearly all branches of industry and around the world – oils, greases, bonded coatings, pastes and many more. Over 75 years of experience, industry-specific know-how, and exceptional test facilities all help to optimise our solutions.



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