



**YOUR EFFICIENCY
IS OUR PASSION**

Specialty Lubricants for the Forging Industry



» We are passionate about what we do. Together we meet your challenges with our experience, dedication and focused teamwork. «

About FUCHS LUBRITECH

Your Efficiency is our Passion

For over 60 years we at FUCHS LUBRITECH have dedicated ourselves to the performance and efficiency of your machines and applications. We concentrate on the development, production and distribution of trendsetting high-performance lubricants and release agents for the most demanding applications in the most diverse branches of industry.

As part of the group of companies of **FUCHS PETROLUB SE**, the world's largest independent supplier of lubricants, we act flexibly and independently – with our own self-contained product range and strong, world-leading brands.

Headquartered in Kaiserslautern, Germany and with locations in the United Kingdom, France, Australia, the USA, Brazil, Japan, China and India as well as distributors and partners in more than 60 countries we guarantee the worldwide availability of our products. You can always rely on a uniform quality standard all over the world.

Our **range** of products includes adhesive lubricants, lubricating fluids and greases, pastes, solid film lubricants, concrete release agents, aerosols and metal-forming lubricants – overall more than 1,000 specialty products that are precisely tailored to the respective application. Our high-performance lubricants significantly contribute to the economical and eco-friendly operation of your equipment.

Our **product brands**, like CEPLATTYN®, CASSIDA®, LUBRODAL®, gleitmo® or STABYL®, represent top quality and reliability in the most diverse **branches of industry**, such as cement and mining, forging, food and beverage, wind power, steel, construction, railways, glass and surface technology.

We consider **service** as a crucial and fundamental component of our products. Our local experts contribute through their broad process-spanning expertise and on-site technical consultation to the performance, efficiency and process reliability of your entire application.

We are the specialists for high-performance lubricants for applications in tribological marginal areas.

Contact us!

Specialty lubricants for the forging industry

High-performance lubricants for optimum safety and performance in the forging industry

Excellent quality of parts, optimum machinery utilisation, reduced operating costs, lower environmental impact: whenever tolerances in industrial applications decrease, our commitment to developing lubricants increases.

With its detailed knowledge of the forging industry, FUCHS LUBRITECH has developed an unsurpassed, comprehensive range of specialised products and technical services that provide optimised lubrication for high operational safety, productivity and efficiency.

Our specialty lubricants offer the highest quality and excellent application results all over the world. We develop our lubricants in close cooperation with the users – for excellent products and economical results.

With our broad range of high-performance lubricants, we are able to provide the most suitable product for any lubrication application in the forging industry. Our high-performance lubricants have been especially developed and exceed the wide variety of requirements for process and operational lubrication.

Our brand names – LUBRODAL®, HYKOGREEN®, CEPLATTYN®, GEARMASTER®, LAGERMEISTER® and gleitmo® – stand for the highest level of quality and reliability in the forging industry.



Areas of application of lubricants in the various process stages of massive forming

Due to the variety of the components manufactured by massive forming, the individual designs of the forging units and the adjacent systems differ significantly. Depending on the process sequence the most diverse types are used, starting with the upstream units such as billet shears and reducer rolls, through to the actual forging units in the form of screw presses, eccentric presses, wedge presses, hammers, hydraulic presses, etc.

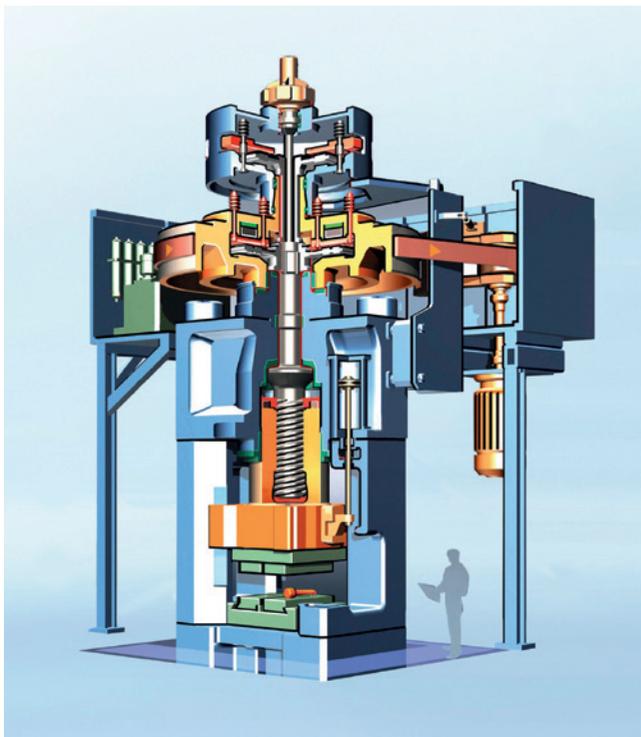
As various as the individual types are, the fields of application of lubricants can be divided into two main categories:

Process lubricants

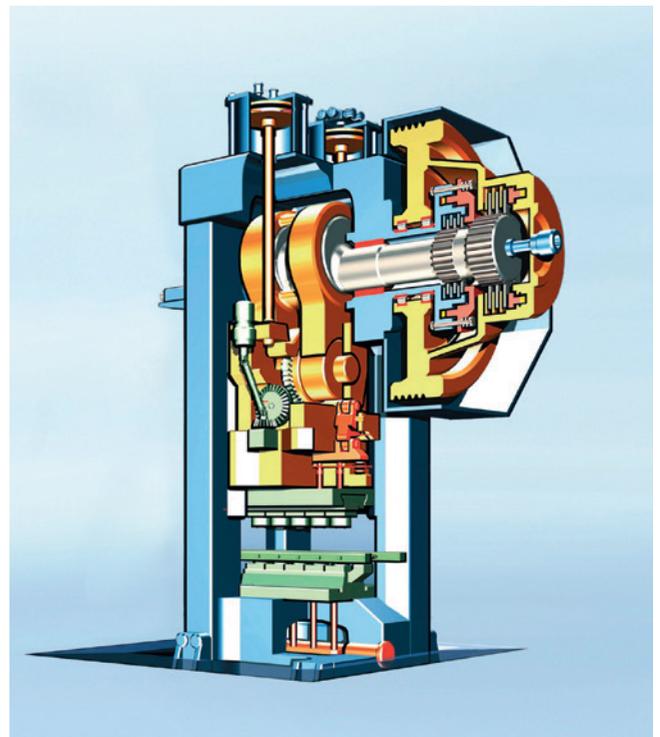
- Products for pretreatment of the billets
- Metal-forming lubricants

Operational lubricants

- Plain and roller bearing lubricants
- Gear lubricants



Screw press



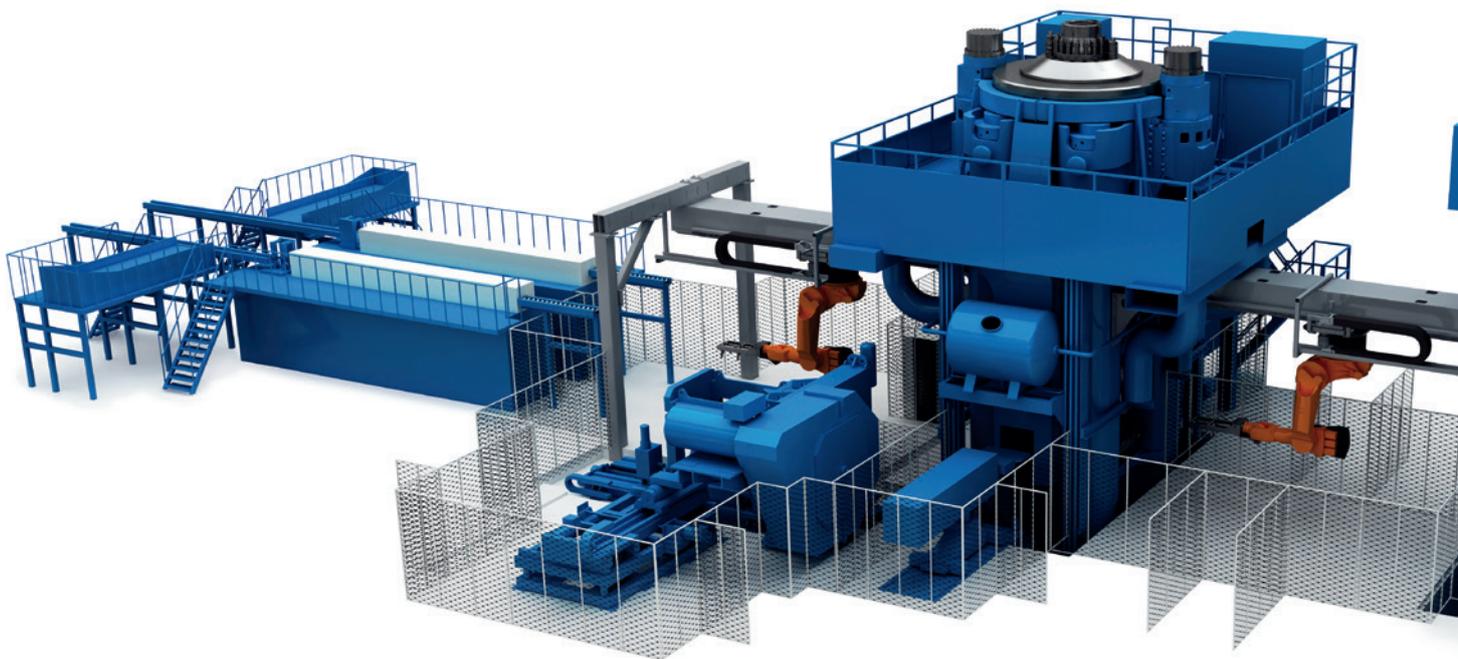
Eccentric press

Fields of application for lubricants in the forging process



Billet pretreatment

Scale that forms during heating of the billets has negative effects on the part quality and on the die life. Billet faces sticking to each other can cause interruptions that lead to an unstable process. A pretreatment with the products of the LUBRODAL range, which have been specifically designed for such a purpose, can help to minimise these effects.



Die lubrication

The lubricants of the LUBRODAL series cover a wide range of applications. Due to the great variety of parameters in forging each application has to be considered separately. The LUBRODAL division team will be pleased to support you in this matter. In general it has to be noted that all water-based die lubricants need to be sprayed. In deep cavities with long extrusion paths (e.g. when forging crankshafts), graphite-free water-based products reach their limits. For applications like this, products containing graphite must be used.

Gear drive

As operational lubricant, the high-quality adhesive lubricant CEPLATTYN KG 10 HMF ensures optimum operation reliability. Combined with the running-in lubricant CEPLATTYN RN these products allow the best possible operational conditions.



Connecting rod bearing

One highly stressed machine component is the connecting rod bearing. This is typically a plain bearing, and so has better damping characteristics than roller bearings. But differing sliding speeds and relative movements during the motion sequences demand a stable lubricating film and the best EP properties. STABYL L-TS MO (grease lubrication) and STABYLAN 2080 (oil lubrication) are able to meet these demands.



Linear guide

Linear sliding guides can be found in a variety of forms in the forging industry. One of the most important tasks is precise guidance of the forging dies. Good adhesion and the best emergency running properties are the basic prerequisites that the lubricant must satisfy. Continual relubrication with STABYLAN 2080 (oil lubrication) and STABYL L-TS MO (grease lubrication) will considerably reduce wear.



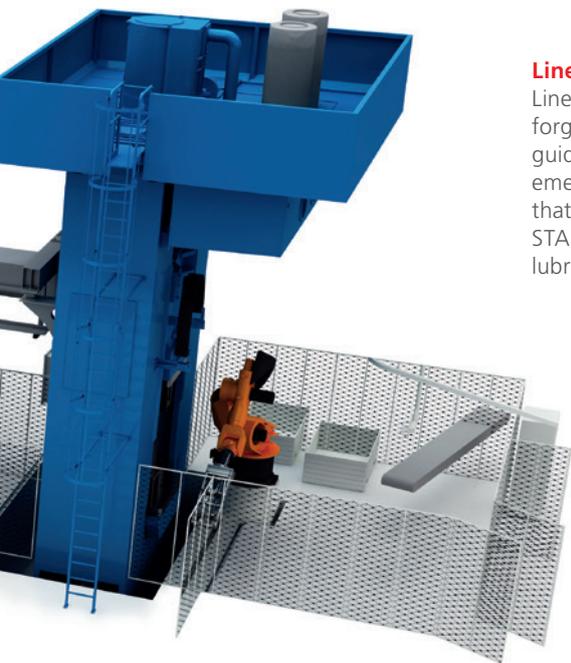
Central lubrication system

The high-performance lubricant LAGERMEISTER CX EP 2 is employed as a long-term grease for centrally lubricated systems. This lubricant, which is saponified with a calcium complex, has the best water-repellent properties and is suitable for the lubrication of the ejector system.



Maintenance products:

Various products are available for machine maintenance. As special rust loosener, FERROFORM SUPER 7 creeps under moisture and provides excellent lubrication properties. METABLANC is a rapid metal cleaner which reliably removes grease, oil, adhesive residues and dirt from metal parts. PBC 1574 is a high-temperature assembly paste. It prevents screws from seizing and is characterised by a high pressure resistance. It is especially suitable as anti-scuffing paste between die and die holder.



Product overview

Application	Product	Product description
Pre-coating	LUBRODAL RV 20	By coating the faces of large billets with LUBRODAL RV 20 an inorganic protective layer is formed. This layer prevents the sticking of the billets to each other during heating and thus related process interruptions.
	LUBRODAL FC 331	LUBRODAL FC 331 is used as a billet pre-coating during warm forging of steel to minimise scale formation during inductive heating and also to optimise flow behaviour and tool life.
	LUBRODAL SR 300	By using LUBRODAL SR 300, the oxidation of the billets in the furnace can be reduced significantly. The remaining scale is a lot easier to remove, which leads to reduced abrasive die wear.
General roller bearings	LAGERMEISTER LP 2	LAGERMEISTER LP 2 is an EP grease on a mineral oil basis and can be used as an all-round grease for general-purpose lubrication.
High-temperature roller bearings	LAGERMEISTER XXL	Thanks to its good pumpability even at low temperatures and long lubrication intervals, LAGERMEISTER XXL is predestined for the lubrication of bearings on forging presses.
Herringbone gearing	CEPLATTYN KG 10 HMF	CEPLATTYN KG 10 HMF was specially developed for use on Open Gears. The high-quality adhesive lubricant has cushioning properties and also reduces wear with shock-type loads.
Tappet guides/sliding guides (Grease lubrication)	STABYL L-TS MO	STABYL L-TS MO (for grease lubrication) and STABYLAN 2080 (for oil lubrication) are ideally suited for the lubrication of tappet guides/connecting rod bearings thanks to their good adhesion in conjunction with low application quantities. The MoS ₂ solid lubricant offers outstanding emergency running properties and protects against wear even under extreme loads.
Tappet guides (Oil lubrication)	STABYLAN 2080	
Connecting rod bearings (Oil/grease lubrication)	STABYLAN 2080/ STABYL L-TS MO	
Ejector systems	LAGERMEISTER CX EP 2	Based on the special saponification of LAGERMEISTER CX EP 2 and its outstanding corrosion protection, the ingress of moisture, which is produced by the die lubricant during the forming process, into the ejector mechanism is greatly reduced.
Gearboxes/transmission gears	GEARMASTER CLP range	The GEARMASTER CLP range is characterised by a high thermal loading capacity, very good resistance to ageing and extraordinary protection against wear. An extension of the oil change intervals is thus possible in many cases.
Transport chains	STABYLAN G 1000	STABYLAN G 1000 is dust-repellent and displaces water. It offers optimal lubrication of chain links thanks to its outstanding creeping effect. Based on its graphite content, very good emergency running properties are also achieved.
Transport chains (high temperature)	CEPLATTYN HT	CEPLATTYN HT exhibits a reliable lubrication even at high temperatures of up to 600°C. Thanks to the graphitised solid lubricant, dry lubrication is ensured even after the evaporation of the carrier oil.
Forming	LUBRODAL F 21 A SET	Due to its well-balanced mix of graphite types, LUBRODAL F 21 A SET helps to reduce die wear and to optimise material flow in the forging process of complex steel parts.
	LUBRODAL F 318 N	To improve industrial hygiene, water-based lubricants which are free of graphite and mineral oil are used, such as LUBRODAL F 318 N, which has excellent releasing properties.
	LUBRODAL F 25 AL	LUBRODAL F 25 AL is an emulsion concentrate with excellent wetting properties that ensures best results during forging of non-ferrous metals like aluminium.
	HYKOGREEN 217	HYKOGREEN 217 is a non-water-miscible, graphite-containing product with good lubrication properties. It can be used for most difficult forming operations.

The information contained in this product information is based on the experience and know-how of FUCHS LUBRITECH GmbH in the development and manufacturing of lubricants and represents the current state of the art. The performance of our products can be influenced by a series of factors, especially the specific use, the method of application, the operational environment, component pretreatment, possible external contamination, etc. For this reason, universally valid statements about the function of our products are not possible. The information given in this product information represents general, non-binding guidelines. No warranty expressed or implied is given concerning the properties of the product or its suitability for any given application.

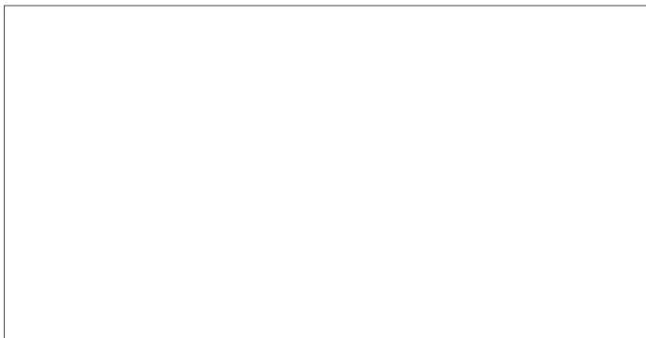
We therefore recommend that you consult a FUCHS LUBRITECH GmbH application engineer to discuss application conditions and the performance

criteria of the products before the product is used. It is the responsibility of the user to test the functional suitability of the product and to use it with the corresponding care.

Our products undergo continuous improvement. We therefore retain the right to change our product range, the products, and their manufacturing processes as well as all details of our product information sheets at any time and without warning. With the publication of this product information, all previous editions cease to be valid.

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