Your powerful partner.
Lubricants for land-based and offshore drilling
Challenges call for solutions
Specialty lubricants for the Oil & Gas Industry

The world's demand for energy continues to grow

With the ever-growing population and the emerging economies around the world, the demand for energy is only expected to grow. Currently over 50% of the world's energy is produced with oil and gas. The demand for energy is expected to increase by 30% over the next 20 years and the production of oil and gas is expected to keep pace with the demand. Doing this will require continued exploration and drilling.

The oil and gas wells being drilled today are much deeper than those drilled 10 years ago. Rigs are often categorized by their drilling depth capabilities. The deepest category and most active is 20,000ft (6,100 meters) or greater. They do not just drill straight down. They also turn the drill bit and drill on a horizontal path, following the geological pay zone. The technology and equipment continues to improve to enable such a drilling process.

We have Klüber products being used on some of the key pieces of drilling equipment used on these rigs. For example the Top Drive, Iron Roughnecks and Draw Works to name a few. These high spec rigs drilling today are running with a much smaller safety factor. It has been noted that the equipment is being pushed to its limit causing excess wear. This situation is making it that much more important to have the best lubrication in the equipment that is considered to be the heart of the rig.

Reliable and robust

We offer tribological solutions which meet your specific requirements in many applications found in the oilfield. The lubricants’ resistance to the environment found in exploration and production is a focus of our Research and Development.

Large investments in equipment and services are common in this industry. The right lubricant choice can have a lasting effect on the life of critical equipment. We currently have a robust product offering and the willingness to develop products specific to your application.

A well-tuned combination of optimal lubricants and single point lubricators assist you in meeting the challenges found throughout the oil and gas industry. Our lubricant dispensers are even EX-proof certified according to IP-65.

The Klübermatic, a single point lubricator, ensures reliable, clean and accurate lubrication 24 hours a day, over many years. Machine availability is safeguarded as there is always fresh lubricant at the friction point. The Klübermatic can also contribute to improved safety and reduced maintenance costs. Longer maintenance intervals mean that the frequency of staff entering hazardous areas is reduced. By utilizing Klubermatics in areas that are difficult to access, the risk level of the workplace decreases considerably. The extended maintenance intervals results in improved man/hour utilization. A positive impact to the bottom line.

High demands - our specialty

As the world market leader in specialty lubricants, we are passionate about tackling the tribological limits of the oil & gas industry.

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Drilling Rig Applications
Land Based Rig

Crown
Klüberlub BE 41-1501

Top Drive
Klübersynth GEM 4 N Series
Klüberplex BEM 41-301
PETAMO GHY 133 N

Draw works
Klüberol GEM 1 N Series
Klübersynth GEM 4 N Series
Klüberplex BEM 41-301
PETAMO GHY 133 N
STRUCTOVIS EHD

Traveling block
Klüberlub BE 41-1501

Rough neck
Klüberol GEM 1 N Series
Klübersynth GEM 4 N Series
Klüberplex BEM 41-301
PETAMO GHY 133 N
STAR MAG2 NBU 30

Mud System
Klüberol GEM 1 N Series
Klübersynth GEM 4 N Series
Klüberplex BEM 41-301
PETAMO GHY 133 N
ISOFLEX TOPAS NE 52

Drilling applications as found in land based drilling

Deck crane
Klüberol M 72-62

Wire rope
Klüberol AG 35-802

Life boats
Klüberol AG 39-802

Jacking legs
Klüberol AG 39-802

Drilling Rig Applications
Offshore Jack-Up Rig

Cantilever & skidding system
Klüberol AG 35-802

Thruster
Klüberol EG 2-100
Klüberol EG 2-150

Wire rope
Klüberol AG 35-802
<table>
<thead>
<tr>
<th>Product description</th>
<th>Klüber specialty lubricant</th>
<th>Product description</th>
<th>Module</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synthetic grease</td>
<td>ISOFLEX TOPAS NB 12</td>
<td>High performance synthetic grease for lubrication of bearings. Excellent wear protection, with a wide temperature service range.</td>
<td>Shale shaker motors</td>
<td>Rolling bearings, plain bearings</td>
</tr>
<tr>
<td>Adhesive grease</td>
<td>Klüber AG 23-102</td>
<td>Meets biodegradability, minimally toxic and non-bioaccumulating standards established by the US EPA for the 2013 VGP</td>
<td>Jack-up gears, winches, steel cables</td>
<td>Open gears, steel cables</td>
</tr>
<tr>
<td>Gear oil</td>
<td>Klüber EGG 2-100</td>
<td>Biodegradable, non-toxic gear oil, ISO VG 100, 150. Meet CLP requirements according to ISO 51517-3</td>
<td>Thruster</td>
<td>Gear set</td>
</tr>
<tr>
<td>Hydraulic oil</td>
<td>Klüber L 4-32</td>
<td>Environmentally acceptable synthetic hydraulic fluids, ISO VG 32, 46, 65. Meet HEES requirements according to DIN ISO 15380</td>
<td>Anchor handling / mooring winch</td>
<td>Hydraulic motor hydraulic components</td>
</tr>
<tr>
<td>On-Deck, multi purpose grease</td>
<td>Klüber M 72-82</td>
<td>Readily biodegradable special grease, NLGI 2</td>
<td>Deck machinery</td>
<td>Bearings</td>
</tr>
<tr>
<td>Heavy duty grease</td>
<td>Klüberhub BE 41-1501</td>
<td>Wear protection for low speed rolling bearings subject to high loads. Resistant to ageing and protects against corrosion, contains solid lubricants for emergency operations</td>
<td>Crown, traveling block</td>
<td>Low-speed bearings</td>
</tr>
<tr>
<td>Gear oil</td>
<td>Klüberlub GEM 1 N Series</td>
<td>High-performance gear oils / multi-purpose oils based on mineral oil and KlüberComp Lube Technology.</td>
<td>Topdrive, drawworks, mud system, iron roughness</td>
<td>Gear drives</td>
</tr>
<tr>
<td>Heavy duty grease</td>
<td>Klüberplex BEM 41-301</td>
<td>High performance semi-synthetic grease for bearings on electric motors and heavily loaded bearings. Extended grease life providing improved equipment reliability.</td>
<td>Topdrive, drawworks, mud system, iron roughness</td>
<td>High load bearings Electric motor bearings</td>
</tr>
<tr>
<td>Gear oil</td>
<td>Klüber synth GEM 4 N Series</td>
<td>Synthetic high-performance gear and multi-purpose oils based on Klüber Comp Lube Technology.</td>
<td>Topdrive, drawworks, mud system, iron roughness</td>
<td>Gear drives</td>
</tr>
<tr>
<td>Gear oil</td>
<td>PETAMO GHY 133 N</td>
<td>Long-term and high temperature grease for rolling bearings. Contains polyurea thickener, mineral oil, synthetic hydrocarbon oil and additives.</td>
<td>Topdrive, drawworks, mud system, iron roughness</td>
<td>Electric motor bearings</td>
</tr>
<tr>
<td>Mineral oil-based grease</td>
<td>STABURAGS NBU 30</td>
<td>Excellent corrosion protection, water resistance, as well as resistance to many diluted alkali and acid solutions</td>
<td>Iron roughness, power tongs</td>
<td>Bearings, sliding elements</td>
</tr>
<tr>
<td>Mineral oil</td>
<td>STRUCTURIS EHD</td>
<td>Excellent wear and corrosion protection for chains. Improved adhesive characteristics for high speed chains.</td>
<td>Drawworks</td>
<td>Chains</td>
</tr>
</tbody>
</table>

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Klüber Lubrication – your global specialist

Our passion is creating innovative tribological solutions. Through personal support and consultation, we help our customers to be successful, around the globe, in every industry. By utilizing complex engineering concepts and experienced, competent employees, we have mastered the growing demand for high-performance, cost-effective special lubricants for over 80 years.