

Lubrication solutions

for electric brakes



BECHEM
LUBRICATION
TECHNOLOGY

Brake-by-wire – lubricant solutions for safe series production applications

Brake-by-wire systems such as EMB, EPB, and EHB are key technologies for modern vehicle architectures. For OEMs, one thing is paramount: maximum safety, reproducible quality, and reliable series production performance throughout the entire vehicle lifecycle. Our fully synthetic high-performance greases are specifically developed to meet the requirements of brake-by-wire applications and are already used in series production by leading manufacturers.

They provide excellent wear protection, high efficiency, and consistent NVH behavior—even under changing load and temperature conditions. Thanks to their high material compatibility with metals, polymers, and elastomers, as well as PFAS-free formulations, our lubricants support a sustainable series production strategy that is built for future regulatory requirements.

Lubrication as an integral part of system design

In brake-by-wire systems, the lubricant determines the friction regime, precision, noise behavior, and service life. Especially in precision actuators and mixed-material tribological pairings, lubrication acts as an active system element.

Our lubricant concepts offer:

- Reliable anti-wear protection for metal-metal and metal-plastic pairings, including glass-fiber-reinforced materials
- High shear stability for consistent performance over the entire service life
- Stable operation from -40°C to $+140^{\circ}\text{C}$, briefly up to $+180^{\circ}\text{C}$
- Reduced friction and NVH, even during micro-movements
- Very good material and media compatibility



High material compatibility



High shear stability



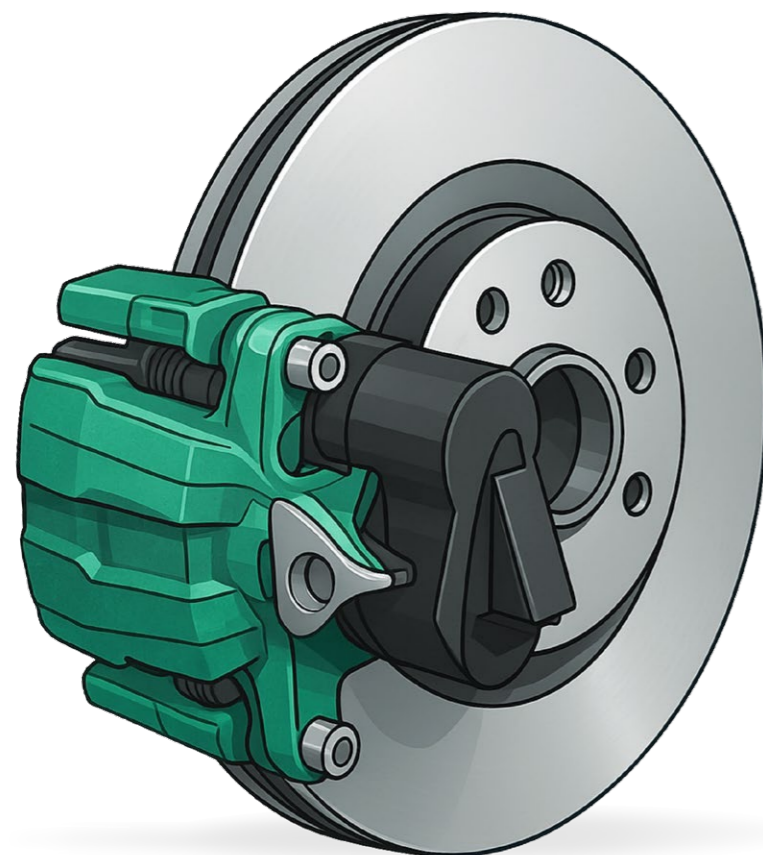
The more sustainable lubrication solution



Good re-lubrication properties

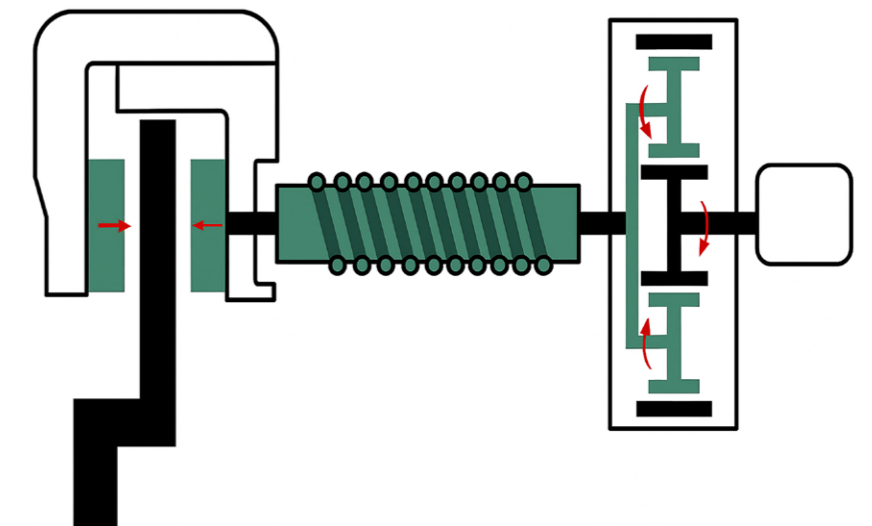
High-performance lubricants make an often underestimated but decisive contribution:

- Reducing failure risks and warranty costs
- Safeguarding system service life without maintenance requirements
- Stable supply chains through series-proven solutions
- Sustainability and compliance through PFAS-free formulations



» Our BECHEM solution ensures reliability and performance for "dry" brake systems.«

Through close collaboration with development teams, we support design, simulation, bench testing, and system validation. The jointly developed solutions create technical confidence and economic stability—today and in future vehicle generations. This turns lubricants from a cost factor into a strategic enabler for innovative brake systems.



PFAS-free



What you should know about
PFAS-free lubricants
from BECHEM

LUBRICATION SOLUTIONS FOR INDUSTRY

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