

your global specialist

Enhanced process reliability -
enhanced transparency.

Lubricating tablet presses in line with FDA requirements



Manufacturing according to GMP



In the pharmaceutical industry, manufacturing according to GMP standards (Good Manufacturing Practice) is routine. Companies producing and marketing pharmaceuticals must ensure that the quality is consistent across the entire production chain. Supervisory authorities are performing more and more audits to ensure this consistency.

If, in an audit, you want to prove compliance with GMP guidelines, you need to have certified lubricants. We have therefore developed special lubricants for the pharmaceutical industry which are registered by the National Sanitary Foundation (NSF) as H1 products.

And the manufacturing plants we use for H1 lubricants are certified according to the international standard ISO 21469.

With NSF H1 lubricants made by Klüber Lubrication you are on the safe side in any audit!

Lubricating tablet presses

Requirements to be met by the lubricant

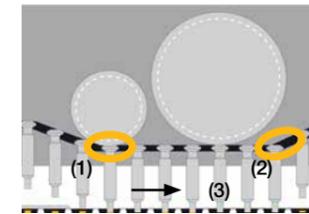
- FDA-compliant
- NSF H1 registered
- Certified according to NSF ISO 21469-Halal-Kosher
- Good wear protection
- No blackening of bronze guides and therefore no contamination with dark particles
- Tested compatibility with elastomer seals on scrapers
- OEM approval

Solution

- Klüberpharma UH1 4-220
- Klüberpharma UH1 4-460

Your benefit

Wear protection of punches



Friction points:
(1) Punch head / thrust roller
(2) Punch head / guide

The right oil viscosity is key! High surface pressure in the friction point punch head / thrust roller would normally require a high oil viscosity. As the oil is also in the punch fit as well, wear in the fit may increase after the pressing procedure. Medium oil viscosity should therefore be preferred.

When selecting the oil viscosity, the OEM's recommendations should be taken as a basis as the backlash of punch and fit varies from OEM to OEM.

The medium viscosities of Klüberpharma UH1 4-220 and Klüberpharma UH1 4-460 have shown the best results in most applications.

Scraper - Elastomer compatibility

When the scraper is lubricated, the scraper seal comes in contact with the lubricating oil. Good compatibility with elastomers is therefore very important. Incompatibility may cause swelling of the o-ring, which in turn leads to wear in the fit.



Klüberpharma UH1 4-220 and -460 have been tested for compatibility with scraper seals from Freudenberg Process Seals.

OEM recommendations

Klüberpharma UH1 4-220 and -460 have been tested, approved and included in the lubrication charts of well-known OEMs.

- Fette compacting
- Kilian
- Kikusui
- Ronchi
- Chamunda
- PTK

Lubricating - cleaning - preserving with certified speciality lubricants for the pharmaceutical industry

	Application	Klüber Lubrication product	ISO VG DIN 51 519	Certifications / registrations	Service temperature range [°C]	Based on	Description and benefits
Lubrication	Tablet punch and bronze guides	Klüberpharma UH1 4-220, 4-460	220, 460	NSF H1, ISO 21469 compliant with FDA 21 CFR 178.3570	-15 bis 110	synthetic special oil	<ul style="list-style-type: none"> - Especially designed for the lubrication of tablet presses, in particular for high-volume production - Good wear protection - Compatible with bronze. No blackening of bronze guides and therefore no contamination with dark particles for reduced reject numbers
Cleaning	Tablet compressing and subject to sugar residues	Klüberfood NH1 6-180, 6-10	180, 10	NSF H1 ISO 21469		synthetic fluid	<ul style="list-style-type: none"> - Excellent cleaning properties with regard to sugar crusts, e.g. milk sugar
	Surface cleaner, universal application	Klüberfood NK1 Z 8-001 Spray		NSF K1, NSF K3		organic solvent	<ul style="list-style-type: none"> - Quick and thorough cleaning - Removes oils, greases, waxes and resin residues - Easy spray application
		Klüberfluid NH1 1-002		NSF K1, NSF H1 ISO 21469 compliant with FDA 21 CFR 178.3570			<ul style="list-style-type: none"> - Removes oils, greases and waxes from metal surfaces - Evaporates without residue
Preservation	Tablet punch	Klüberoil 4 UH1-1500 N Spray	1500	NSF H1, ISO 21469 compliant with FDA 21 CFR 178.3570	-25 bis 120	synthetic oil	<ul style="list-style-type: none"> - Good corrosion protection while punch is stored - Easy punch assembly - Easy spray application
General-purpose	Spindles, open gears, hinges, sliding rails, chains	Klübersynth NH1 4-68 Foam Spray	68	NSF H1	-35 bis 120	synthetic oil	<ul style="list-style-type: none"> - Excellent adhesion for good lubricating effect and reduced wear - Unique foam combination with oil supports easy application including overhead application without dripping - Optimised consumption due to capillary action, ensuring slow but clear penetration of the lubricant to the friction point

Our NSF H1-registered lubricant range also contains the right, FDA-compliant solution for all other machine parts (e.g. hydraulics, gears, rolling bearings, etc.).

www.klueber.com

Klüber Lubrication – your global specialist

Innovative tribological solutions are our passion. Through personal contact and consultation, we help our customers to be successful worldwide, in all industries and markets. With our ambitious technical concepts and experienced, competent staff we have been fulfilling increasingly demanding requirements by manufacturing efficient high performance lubricants for more than 80 years.



A company of the
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Editor and copyright: Klüber Lubrication Austria GmbH, Franz-Wolfram-Schererstraße 32, A-5020 Salzburg, www.klueber.at

