CORRECT LUBRICATION

FOR HIGH PERFORMANCE ROLLER CHAINS

„The one who lubricates well, rides well“ is an old but ever-valid saying. Tests have shown that perfect chain lubrication can increase the service life at least 50-fold.

We know from practical experience that approximately 60% of all chain damage is due to faults in chain lubrication. Indicators of poor lubrication are: hot running chains, heavy rusting, squeaking or loud noises during operation as well as buckling stiffness.

Regular and less lubrication is more effective than infrequent and too much. There must always be a sufficient amount of lubricant between pins, bushes and rollers (chain joints) to reduce wear, protect against corrosion and reduce operating noise.

ADVANTAGES

Less operating noise
Rusty chains squeak or at least run louder. The oil dampens the shocks that occur when the chain enters the sprocket and thus reduces the noise during operation

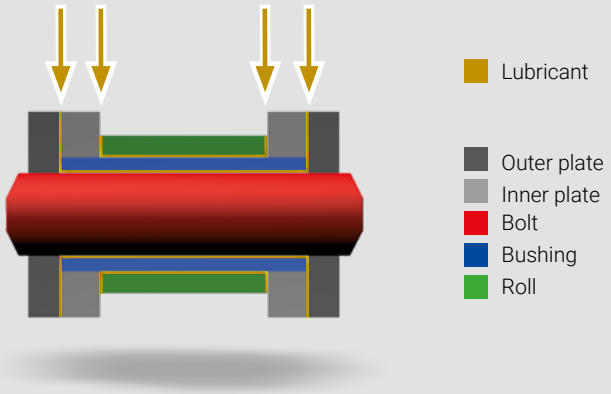
Higher operational safety
Many chain damages can be avoided by proper maintenance and consequent damages to machines

Longer service life
Well lubricated and maintained FB high performance roller chains have less wear. In some cases, this extends the service life by as much as 50 times

Cost saving
Chains need to be replaced less often and production therefore does not have to be stopped as often. The result is lower spare parts and assembly costs as well as less power consumption

FACTORY LUBRICATION
FB ROLLER CHAINS

FB high-performance roller chains are immersed in a 150°C hot oil bath for approx. 50 min. During this process, the chain links are angled, the lubricant penetrates the joint parts and thus extends the service life of the chain and sprocket teeth. It dampens the shocks that occur when the chain enters the sprocket and reduces noise during operation. Our initial lubrication is a combination of lubricant and corrosion protection. We recommend relubricating the chains accordingly during commissioning or after a short running time. We also offer special lubricants that are optimally suited to challenging operating conditions (e.g. H1-compliant for the food industry, for high temperatures, for high surface pressures, ...).



OPERATIONAL LUBRICATION
FB ROLLER CHAINS

The correct and regular lubrication of chains is very important in order to achieve the longest possible service life of the chains and sprockets.
Correctly lubricated chains run more quietly and are also cooled, which is especially important for fast-running chain drives. This also has a positive effect on the current consumption of the drive motor and thus on power consumption and energy costs.

The lubricant penetrates the gap between the chain pins, chain bushes and chain rollers via the inner and outer plates. A continuous lubricating film forms there. The greatest lubricant requirement is between the pins and bushes, the lubricant requirement at the chain roller is relatively low.

With link chains, wear often occurs between the pins and the inner diameter of the bushes. We also recommend lubricating the chain link plates or chain glide bars when the chains run on the chain link plates.

Regular relubrication is necessary so that the lubricating film does not break off and the chains do not run dry. Over-lubrication does not extend the service life, but on the contrary can lead to contamination of system parts or the ground and thus have a negative impact on the environment.

THE FOLLOWING LUBRICANT PROPERTIES ARE IMPORTANT:

- Very good creeping capacity to quickly penetrate the gap between the chain components
- Excellent protection against wear and corrosion
- Resistant to dirt, water, various acids, etc.
- Highest water resistance and oxidation resistance
- Very good long-term adhesion, so that the lubricants cannot be thrown off the chains in the event of large centrifugal forces or centrifugal forces
- Lubricants with cleaning properties are optimal

CORRECT MAINTENANCE AND LUBRICATION

ROLLER CHAINS

WHAT YOU SHOULD PAY ATTENTION TO WHEN LUBRICATING CHAINS

1. Lubricate regularly, professionally and adapted to the conditions of use (do not over-lubricate, do not under-lubricate, ensure correct chain tension).

2. Lubricate in the relaxed chain area - if the chain is under tension, the lubricating oil cannot penetrate.

3. Heavy oil, hydraulic oil, used oil or grease are not suitable as chain lubricants. Used oil usually contains fine metal abrasion, which accelerates joint wear.

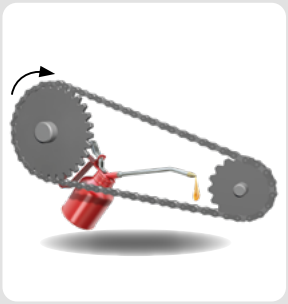
4. Do not mix lubricants from different manufacturers and make sure that they are compatible with the initial lubricants. In addition, they should not contain thinner, which evaporates quickly after lubrication and forms a non-flowing, tough lubricating film (e.g. component in many chain sprays).

5. Pay attention to the viscosity of the lubricants. In order for them to enter the chain joint and adhere to the lubrication points, they must remain free-flowing during operation and at all ambient temperatures. The lubricants must have good lubricating and creeping properties. It is ideal if the lubricants also offer cleaning properties. The ideal viscosity is ISO VG 46 - 220 or SAE 20 - 50 (at +40°C).

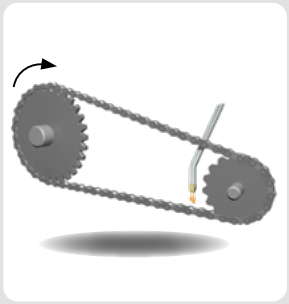
6. In dusty environments, we advise against the use of adhesive lubricants (e.g. sawdust, sand, cement, slag, metal shavings, etc.). The dusty conveyed material tends to combine with these adhesive lubricants and form „abrasive pastes". The lubrication points stick together and no more lubricant can penetrate into the chain joint.
„Abrasive pastes" increase joint wear.

Relubrication with viscous lubricants causes thicker and thicker layers of grease, which only accumulate on the OUTSIDE of the chains and finally close (seal) the lubrication points. Visually, the chains look very well lubricated, but when you dismantle the chains, the true picture becomes apparent - little to no lubricant in the joint, but mostly pitting corrosion.

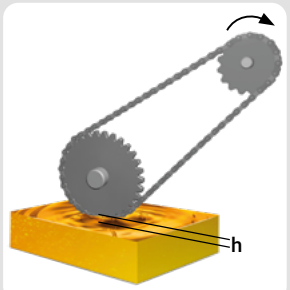
LUBRICATION METHODS FOR OPERATIONAL LUBRICATION (RELUBRICATION)



Manual lubrication
For chain drives with a speed of up to approx. 0.5 m/s, lubrication can be done by hand.
The oil is applied by brush, oil can or spray can.

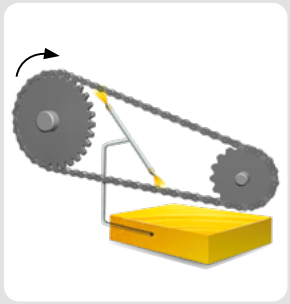


Drip lubrication Apply
lubricant as shown in the illustration above, approx. 5 to 20 drops per minute for each strand. The higher the speed and the larger the chain dimension, the more drops per minute.



Oil bath lubrication
At chain speeds of up to approx. 4 m/s, the chain itself may be immersed in the oil. Avoid immersing the chain too deeply, otherwise the oil may foam. This will impair the lubrication reserve. Dimension h should be approx. 6 - 12 mm.

For higher speeds, we recommend mounting an oil flinger next to the sprocket. Only the oil flinger is immersed in the oil. Dimension h should be approx. 12 - 25 mm.

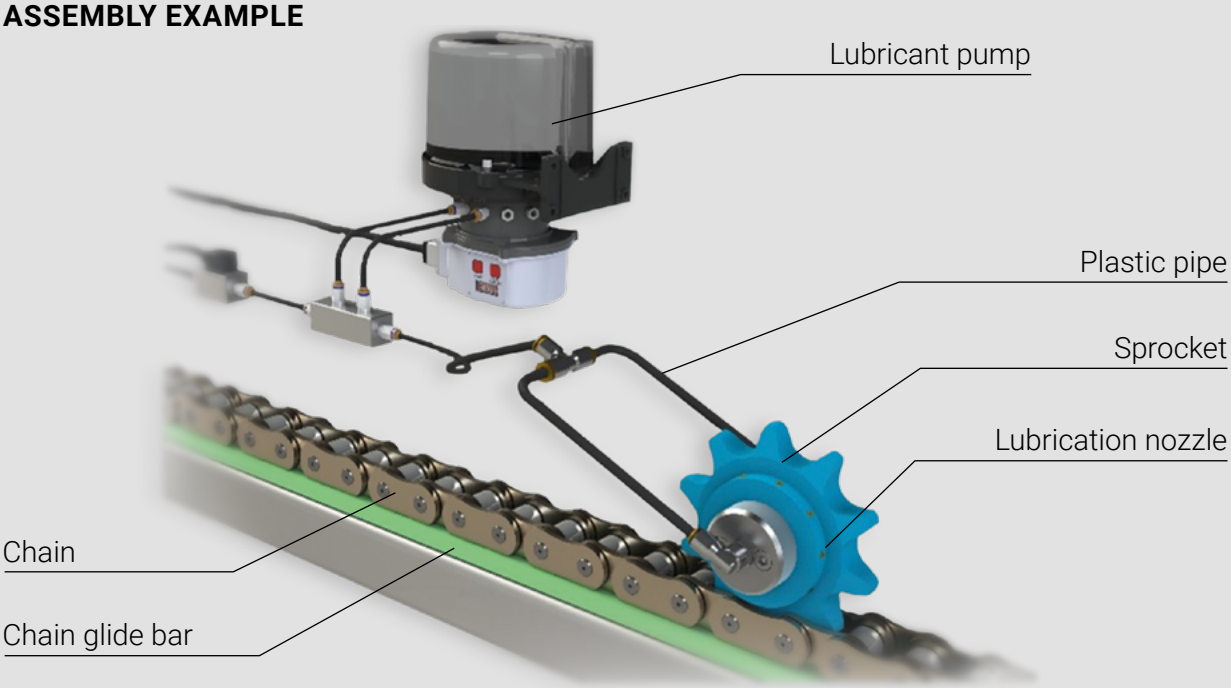


Pressure lubrication
In pressure forging, oil is sprayed onto the upper or lower side of the chain plates (but not onto the chain rollers) by means of spray nozzles. The amount of oil circulated should be such that the temperature of the oil does not exceed 100 to 150°C.
Only low-viscosity oils can ensure the necessary lubricant supply.
Larger chain dimensions (approx. ≥ 1 1/2" pitch) require lubricant quantities that are not normally available in spray cans.

RotaLube®

CHAIN LUBRICATION SYSTEM

ASSEMBLY EXAMPLE



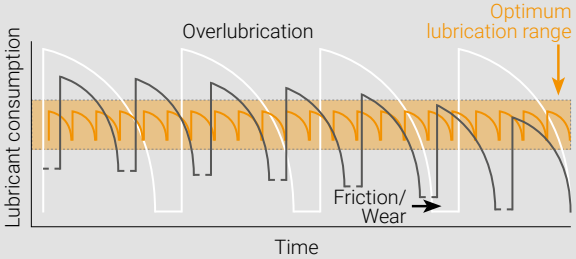
Extend the life of your chains and sprockets with the unique RotaLube® automatic lubrication system.

The optimum amount of lubricant at the right time! RotaLube® is the only industrial chain lubrication system where the lubricant is guaranteed to be applied at the correct lubrication point.

The automatic lubrication is not affected by speed fluctuations or chain pitch and works perfectly for roller chains and conveyor chains of any size and type.

PERFORMANCE OF RotaLube®

- RotaLube®
- Brush, drip and pneumatic lubrication
- Manual chain lubrication



ADVANTAGES

Longer chain life
Up to 60 times the service life, highly recommended especially in corrosive environments

Cost saving
Higher plant availability and profitability, reduces lubricant consumption, energy costs and spare parts costs

Simple and effective to use
System runs fully automatically, easy to install, constant monitoring

Flexible
For different chain sizes, conveyed goods and operating conditions as well as types of lubricants and manufacturers, the system can be installed from above, below or lubricate from the side

Environmentally friendly
No waste of lubricant by avoiding overlubrication

RotaLube®
A member of the Group of Companies

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Profitable chain-solutions for a sustainable tomorrow

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