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Dry Lubrication System WLS

Dry lubrication systems WLS & RM2000T®

Dry lubrication system WLS

The highly efficient all-round solution for plastic conveyor belts as well as steel and plastic guides in the food industry.

The dry lubrication system WLS, in combination with the NSF-approved lubricant RM2000T®, forms a perfect central lubrication system, which counters the challenge of preventing bacterial growth while operating a conveyor lubrication system with outstanding effectiveness.

Water is essential for sustaining life - not just for humans, but for germs and bacteria, too. This makes water the ideal breeding ground for germs and bacterial growth. That's why the approved lubricant RM2000T® functions without any water-containing ingredients at all. RM2000T® does not promote germs or bacteria.

The dry lubrication system WLS is excellently suited for filling systems, which are used extensively in the food industry. WLS is used wherever fruit juice, milk packaging, beverage cans, beverage crates or PET bottles are transported during the production and filling process.



Dry lubricant RM2000T®

Unlike other systems, WLS is deliberately designed as a dual system, i.e. the upper lubrication system and the lower lubrication system work separately in the direct contact system; this alone creates multiple advantages for additional applications.

Direct contact, which avoids brushes and spray nozzles, ensures the minimal provision of lubrication. The container transport of a large PET line thus only requires about 50 litres of lubricant per year with WLS (evaluated customer data).

Advantages

WLS offers significant technical and economic advantages compared to conventional water-based lubrication systems.

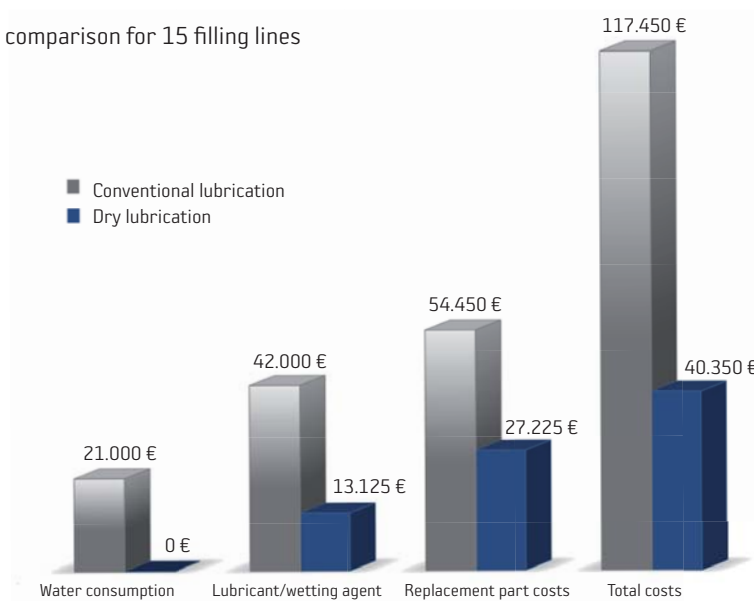
Unlike conventional lubrication systems, the WLS operates with a fully-fledged lubricant with an oil/solids base. This makes WLS much more versatile.

Technical advantages

- Higher operating efficiency
- Reduction of packaging waste
- Substantial reduction of friction between chain and container as well as chain and guide
- Substantial reduction of friction between the bottle and guide rail in air transport
- Preventing bottle jams in air transport
- Reduction of power consumption by up to 30%
- Higher service life for the chain (up to factor 3)
- Elimination of stick-slip (static friction = gliding friction)
- Reduction of noise pollution
- Generates no foam, no calcification, no water. This creates: increased service life of sensitive components.

Economic savings

Annual cost comparison for 15 filling lines



- Lubricants & cleaning agents: -30% / -80%
- Water and waste water for dry lubrication: 100%
- Water and waste water for WLS dry lubrication: -50%
- Maintenance & materials used: -50%
- Chain replacement costs: -70%
- Operating malfunctions: -30%
- Energy: -30%
- Operational safety: -50% / -90%
- Total savings: -80%

Other advantages

- Clean transporters - no calcification deposits
- Better working conditions
- Fewer work accidents on dry floors
- Prevents bacteria growth by using special food-grade lubricant (RM2000T®)
- Clean lubricant film - PTFE repels dirt as well as aqueous solutions

Sustainability

Modern production increasingly takes the sustainability aspect of production materials and facilities into consideration.

The dry lubrication system WLS offers several benefits in terms of sustainability:

Conservation of water resources

0 m³ water consumption for packing flow through optimized dry lubrication technology, compared to an average of 400 m³ of water per 5,800 hours of operation per line for wet lubrication.

Reduces cleaning frequency

Using micro-quantity lubrication creates a sturdy, dirt-resistant dry lubrication film which is not completely removed during cleaning. This means less cleaning is required per year.

Less dirt and bacteria-contaminated waste water when cleaning

The dry lubricant film and the reduced cleaning per line avoid bacteria-laden lubricant mixtures.

Application

WLS can be used in many different ways. All subsequent applications can be operated with only one control centre.

PET filling plants

- Container transport
- Pack transport

Can filling plants

- Container transport
- Pack transport

Soft packing filling plants

- Container transport
- Pack transport

Bottle filling plants

- Container transport
- Pack transport

Other applications

- Helix cleaned chain
- Cleaned chain for clamping jaw conveyor
- Tray packer
- Carton packer
- Lid applicators
- Screw tops
- Kegs
- Bottle crates

Reducing your energy consumption

The optimum dry lubricant film generates less friction on the belts, with average friction values measuring only 0.11 to 0.15 for soft packaging and 0.06 to 0.09 for PET bottles. This feature and the pinpoint lubrication of the guides reduce your power consumption.

Longer service life for wear parts

The absence of water results in less chain elongation, while the effective surface protection provided by the dry lubricant creates less wear on the top and bottom sides of the chains as well as less damage to rolling bearing elements.

More pleasant working conditions for your employees

Our system keeps lubricant off the floors, unlike wet lubrication water mixtures used for wet lubrication or semi-dry lubrication. This decreases the accident risk caused by slippery floors. The reduced total water use positively affects the humidity in the production halls. Our pinpoint dry lubrication process allows you to reduce noise pollution, such as squeaking and rattling noises coming from the lines, especially for systems that operate without lubrication for conveyor belts.



9,333,150 l
Annual water savings

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