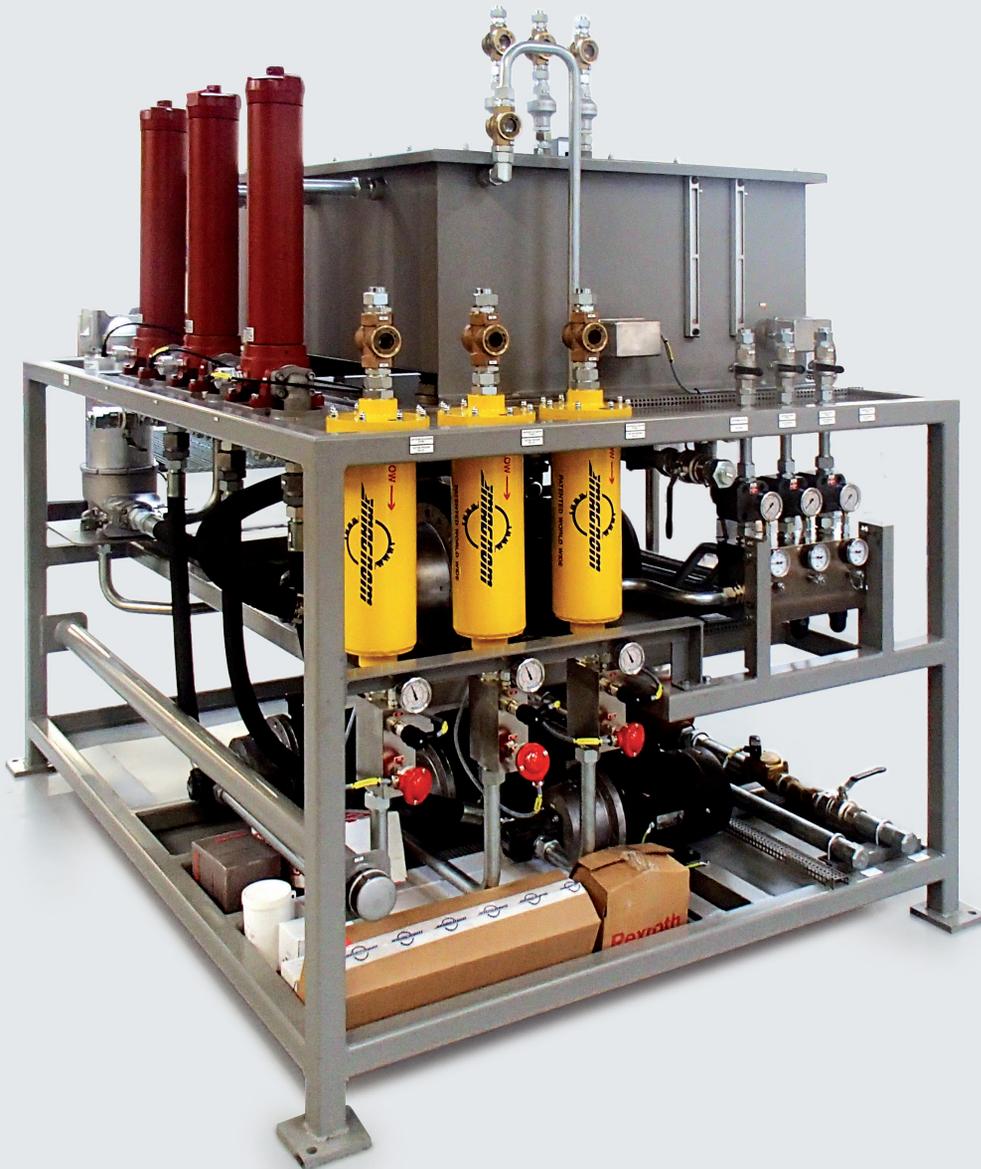


One Source

Improved lubrication station for ATOX[®] grinding rollers



Reduce operation and maintenance costs

Benefits

- Lower long-term operating costs
- Lower maintenance costs
- Fewer unplanned stoppages
- Easier to achieve production targets
- Improved surveillance

High quality oil that is conditioned in a lubrication station is essential to maintain highly durable roller bearings. If the temperature of the oil becomes too high, its viscosity decreases and the life of the bearings become much shorter. Debris from damaged bearings will, if neglected, cause the oil to bypass the filter elements, which further accelerates the deterioration of the bearings. Besides, if the moisture content in the oil exceeds 200 ppm, the bearing elements will suffer.

New, improved lubrication station

Since lubrication stations were introduced in ATOX® mills, mill performance and reliability have improved significantly. The latest addition to FLSmidth's lubrication station portfolio is the new, improved 7 pump station. The lubrication

station features a range of safety components such as filters and sensors that help to improve the condition of the oil and minimise the risk of damage and serious faults. The new 7 pump station is available for all mill sizes except the ATOX 17.5.

Retrofit possibilities

Depending on the condition of the existing installation and the level of reliability desired, FLSmidth offers various upgrading solutions:

A state-of-the-art lubrication solution is to replace the flow divider or the old 7 pump station with a new, improved 7 pump station. This will benefit the performance and reliability of the ATOX mill. Alternatively, FLSmidth may retrofit the existing 7 pump station, which offers some of the benefits of new pump station at a lower cost.

Features	Latest 7 pump station replacing flow divider	Latest 7 pump station replacing old 7 pump station	Upgrade of existing 7 pump station	Advantages
Improved oil tank design	•	•		Longer oil life
Cleanable magnetic return filters	•	•	•	Longer bearing life Bearing failure indication
Finer return filters	•	•		Cleaner oil tank Less wear on components
Finer off-line circulation filter	•	•		Better oil condition Longer bearing life
Optimized pump flow and cooler sizes	•	•		Better oil condition Longer bearing life
Roller specific feed/return pumps	•	•		Easier trouble-shooting Increased reliability
Inline water saturation sensor on circulation pipe	•	•	•	Better oil condition Longer bearing life
Metal particle sensors on return and circulation pipes	•	•	•	Improved warning before failure
Dehumidifier at tank top	•	•	•	Better oil condition Longer bearing life
Cleanable magnetic filters on breather lines	•	•	•	Prevents metal pollution of tank in case of roller overfill

Retrofit solutions

New 7 pump station replacing flow divider

In recent years flow dividers have proved somewhat sensitive to oil pollutants, which reduce the flow capacity and/or cause mill stoppages. If the flow divider is replaced by a new 7 pump station, the sensitive oil components are kept within a separate compartment, which significantly improves mill availability.

A complete new 7 pump station installation consists of a new central lubrication station, individual oil pipes to each of the mill rollers, new oil and air connections to the centre piece, a complete local control panel and all necessary documentation.

New 7 pump station replacing old 7 pump station

Replacing an old 7 pump station with the new 7 pump station will improve the condition of the oil and extend the oil life. Besides, it minimises the risk of bearing damage. Water saturation sensors, metal particle sensors and other warning features help to minimise the risk that critical components may fail. Roller-specific feed and return pumps facilitate trouble-shooting and improve the stability of the mill.

A new, improved 7 pump station comes with a complete lubrication station, a state-of-the-art local control panel and all necessary documentation.

Upgrade of existing 7 pump station

Reusing the existing pump station but adding the retrofit kit will provide some of the benefits of a complete replacement with a relatively small modification. The kit contains magnetic filters (with washable cores) for oil return and breather lines, magnetic particle sensors for key points in the circuit, as well as a water saturation sensor for the oil conditioning circuit.

The sensors will report irregularities to the LCP (with modified software), enabling the maintenance crew to take timely action. The retrofit package includes all necessary documentation for the installation.



New, improved 7 pump station



Retrofit kit for existing 7 pump station

1. **Cleanable magnetic return filters**
2. **Water saturation and metal particle sensor switches**
3. **Metal particle sensor**
4. **Dehumidifier**
5. **Cleanable magnetic filters on breather lines**

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