# Case Study

# Seals



**Summary** 

Industry: Pharmaceutical

Application: Centrifuge

Actual Saving: Batch losses eliminated

Payback Period: Immediate



# Sealing Solution Designed and Manufactured by ERIKS

## **ISSUE**

The production process of a large pharmaceutical manufacturer involved the use of a large centrifuge which opened and closed numerous times during its operation. The seal fitted to the unit ensured containment, however, in its closed state it had failed contaminating production resulting in loss of production batches.

# **SOLUTION**

Following an initial examination, it was discovered the failure was due to inherent properties of the solid core O-ring. It was determined that the compression led to deformation and material memory returned to its original form. When the seal is in operation, deformation drives the forces that push the material onto the surfaces, causing it to extrude and fail.

Following further examination, ERIKS offered two specially designed perfluoroelastomer (FFKM) profiled seals. The recommended seals had larger contact surfaces than the original O-rings and would fill the groove to reduce the possibility of product contamination. The design also provided a sharp profile which will help clean the surface of the bowl as it closes.

## **OTHER BENEFITS**

- Reliable, long-term sealing performance
- Higher temperature stability of up to 327°C
- Perfluoroelastomer material resists over 1,800 different chemicals
- ERIKS design and manufactured

# **FURTHER COMMENTS...**

The customer is pleased with the solution and has now placed numerous seal orders to resolve future centrifuge issues.

#### **MORE INFORMATION**

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