

Case Study: Poultry Processing

KLOZURE® ISO-GARD®



INDUSTRY

Food - Poultry Processing

CUSTOMER

A diversified food processing company, with facilities located throughout the US.

BACKGROUND

The customer had persistent problems with sealing the bearings in their non-metallic feather picker housings. Using standard lip seals, and with a monthly maintenance program, they still encountered frequent failures. With 72 assemblies (each with two sealing locations) this had a detrimental effect on manufacturing efficiency, and placed a significant burden on the maintenance teams.

CHALLENGES FACED

Poultry feathers were getting under the lip seals and into the bearing housing, causing frequent and unexpected failures. Daily wash-downs also used a chemical cleaning solution that could also damage the bearings if not sealed correctly. Additionally, there was limited space available for any modification of sealing element.

Meat processing environments are highly regulated by the FDA, so any manufacturing changes must be carefully controlled. Therefore the customer required close support to ensure that any changes could be implemented with full confidence.

OPERATING CONDITIONS

1. Size: Shaft - 1.25" (3.18cm) / Bore - 2.84" (7.21cm)
2. Temperature: Approx. 100° - 110°F (38° - 43°C)
3. Application: Roller Seals and Bearing Protection
4. Media (process): Poultry feathers, blood, animal fats
5. Media (cleaning): Ammonia-based cleaning solution
6. Pressure: Ambient but excessive vibration/system shock
7. Speed: 1800 rpm

SOLUTION AND BENEFITS

Through close collaboration with the customer, it was determined that the best solution would be Garlock's ISO-GARD® Bearing Isolator. Made using FDA-compliant filled PTFE, this provides excellent chemical resistance and meets appropriate industry standards. The physical dimensions could also be altered to fit the restricted mounting space inside the bearing housing. The tight fit rotor/stator design provides positive sealing of both the shaft and bore, preventing feather material from working its way into the bearing housing. Product and installation training was also provided, giving full confidence to the customer.

While the unit cost of the ISO-GARD® was more than the lip seal, the scheduled maintenance could be extended from monthly to once every 6 months – from this the customer calculated their annual cost savings at approximately \$100,000.

For more information, please visit:
<http://www.garlock.com>

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