

DIAMOND® FOOD PACKAGING CHAIN DELIVERS MILLION-DOLLAR SAVINGS

CHALLENGE ▼

A large pork processing facility produced 18 million servings of food per day. Specialized rotary vacuum packaging machines utilized conveyor chain to coordinate the feeding of materials into the machine. On average, the pork processing facility replaced the competitor's chain every six to nine months on various machines throughout the plant.

As the competitor's chain elongated, the top and bottom chain strands came closer together as the tensioner (take-up mechanism) applied the same amount of load. Once the chain reached a take-up gap of 17 mm, it would need to be replaced. Premature chain elongation led to timing issues in the machines such as tooling repairs, packaging rework and downtime. The pork processing facility wanted to extend chain wear life and prevent the added timing issues.

SOLUTION ▼

To reduce premature elongation, Diamond experts recommended replacing the competitor's chain with Diamond® Food Packaging Chain on one of their rotary vacuum packaging machines. The machine required C2100H with extended pins every 3rd and 12th pitch. The base chain was constructed with nickel-plated carbon steel, offering a corrosion-resistant barrier to prevent rust. Extended stainless steel pins resisted corrosion when exposed to chemicals or acids.

RESULTS THAT MATTER ▼

The chain originally measured 32.27 mm on the tested rotary vacuum packaging machine. Three years later, the take-up gap was measured at 24.85mm – not yet reaching the 17 mm take-up gap where the chain would need to be replaced.

Diamond Food Packaging Chain lasted three years in the application before being taken out of service as the machine was decommissioned. Considering total replacement costs, maintenance costs and downtime, the switch would save the pork processing facility an estimated \$176,190 per machine. At this facility, there were 12 machines – leading to total projected savings of \$2,114,280 if implemented facility-wide.



Chain Life
+2.5 Years
Projected Total Savings
\$2,114,280

Diamond® chains are part of The Timken Company's growing portfolio of engineered bearings and industrial motion products.

www.diamonddrives.com