

DRIVES[®] DOUBLE-PITCH CONVEYOR CHAIN KEEPS SPIRAL ICE CREAM FREEZER TURNING

CHALLENGE ▼

A dairy-free ice cream manufacturer was facing recurring challenges with their spiral freezer's chain drive. Issues included excessive wear and chain failure attributed to side-loading and inadequate lubrication.

These concerns prompted an annual shutdown for maintenance, estimated at 120 hours, to remove and replace the competitor's chain as well as the freezer pans. With a total chain length of 460 feet and over 700 pans, the process was both labor-intensive and time-consuming. Throughout the year, the ice cream manufacturer also found it necessary to replace multiple sections of the competitor's chain due to wear, leading to operational disruptions.

The ice cream manufacturer wanted to extend chain wear life and drastically reduce maintenance and downtime.

SOLUTION ▼

To address this problem, Diamond-Drives recommended switching to Drives[®] C2060H Chain with 600 AS Series round parts for added corrosion resistance. Extended Life CHP[®] pins were incorporated to reduce wear and quad-staked to prevent pull-out when running vertically. Press-fit connecting links further reduced wear and potential failure. Additionally, Diamond-Drives recommended the use of a specific lubricant designed for lower temperature applications.

RESULTS THAT MATTER ▼

After one year on the drive, Drives C2060H chain was measured and evaluated, revealing wear levels between 0.4% and 0.6%. At this rate, the Drives chain is estimated to last 2.5 years versus the competitor's annual replacement. Considering total replacement costs, maintenance costs and downtime, the switch is projected save the ice cream manufacturer \$36,500 annually and \$109,400 over the life of the chain.



Projected Chain Life

+1.5 Years

Projected Total Savings

\$109,400

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

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