

# BISON® CASE STUDY

 Food & Beverage Market

## 730 Series PowerSTAR Gearmotor

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## Corn Processing Application

Where corn kernels are processed for frozen food, efficiency is key.

### Background

In the heart of a bustling food production facility, where corn kernels are processed for frozen foods, efficiency is key. A large food producer company, tasked with processing an enormous volume of corn each year, relies on a sophisticated conveyor system to drive corn cobs through, de-kernel them, and propel them further down the line.

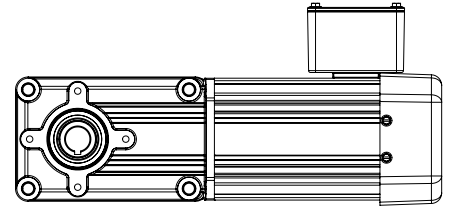
730 Series  
PowerSTAR Gearmotor  
AC Model



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## Corn Processing Application

### 730 Series PowerSTAR Gearmotor



#### CHALLENGES:

- **Hydraulic Motors** – Previously used but presented mechanical challenges.
- **Temperature Fluctuations and Inconsistent Performance** – Changing temperatures caused variation in hydraulic fluid viscosity, which resulted in variable motor speeds and erratic conveyor performance.
- **Environmental Factors** – Needed a solution that could withstand the rigors of a four-season environment.
- **Speed Control** – Required precise speed control for consistent operation.

#### SOLUTION:

Bison's 730 Series PowerSTAR Hypoid Gearmotor

- **Right-Angle Hypoid Gearmotor** – Recommended with an inverter drive for enhanced speed control.
- **Durability and Resilience** – Engineered to excel in both indoor and outdoor environments.
- **Sealed Design** – Fully sealed for improved dust and liquid ingress protection
- **Implementation** – Installed on each corn conveyor to drive the kernelling process.

#### RESULTS:

- **Seamless Operation** – PowerSTAR units operated flawlessly throughout an entire season.
- **Maintenance and Cost** – Reduced maintenance issues and replacement costs.
- **Centralized Control** – Speed controlled through a single drive, enhancing convenience.
- **Future Applications** – Manufacturer plans to use PowerSTAR gearmotors in additional applications.

#### ABOUT BISON

For more than 100 years, Bison®, an AMETEK business, has helped customers differentiate their products by developing robust, flexible and durable motors, blowers and pumps under the brand names – Bison® Gear Motors, Lamb® Vacuum Motors, Nautilair® Combustion Blowers, Prestolite Motors DC Brushed Motors, ROTRON® Regenerative Blowers, ROTRON® Transportation and Windjammer® Brushless Blowers.

Bison® engineers thrive on technical challenges and provide customers with collaborative, customizable and optimized fluid-moving, fractional and integral horsepower solutions. Bison® has worldwide sales representative support, research facilities and manufacturing facilities in the United States, China, and Mexico. The company is headquartered in Kent, Ohio.

Bison® is a business of AMETEK – a leading global provider of industrial technology solutions serving a diverse set of attractive niche markets with annual sales over \$6.0 billion.