BISON®
CASE STUDY

Food & Beverage Market

725 Series PowerSTAR Gearmotor

CONTACT BISON

Coffee Roasting Application

A coffee equipment manufacturer has been designing coffee roasters for decades using a chain and sprocket system.

Background

For decades, a coffee equipment manufacturer used a chain and sprocket system in their roasters. Due to challenges in alignment and installation, they sought a solution to streamline production and reduce installation costs. Bison proposed the 725 Series PowerSTAR hypoid gearmotor as a superior alternative during discussions. The chain/sprocket setup was initially chosen for its flexibility in adjusting output speeds to match various coffee bean types by changing sprocket sizes.

Concerns about the heat generated by the rotating roasting drum led them to believe a direct drive system would be prone to failure and costly. Ultimately, the perceived cost efficiency of the chain and sprocket system discouraged them from exploring other options.

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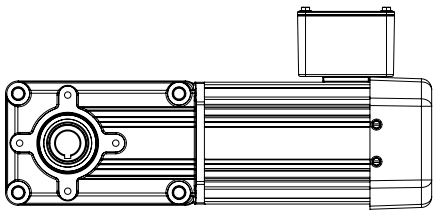
725 Series PowerSTAR Gearmotor



CHALLENGES:

- **Cumbersome Alignment and Installation** – Required additional mounting, framing, and alignment. Also, increased installation time and cost.
- **Functionality** – Needed to maintain speed control through interchangeable sprocket sizes.

SOLUTION:

Bison's 725 Series PowerSTAR Hypoid Gearmotor

- **Right-Angle Hypoid Gearmotor** – Suggested as a direct drive system to replace the existing design.
- **Efficiency and Performance** – Advanced hypoid gearing technology ensures efficient, quiet, and cool operation.
- **Cost and Installation** – Reduced installation and alignment costs and improved energy efficiency.
- **Evaluation** – Provided sample units for performance testing in the application.

RESULTS:

- **Immediate Benefits** – Fewer sub-assemblies to mount and align.
- **Proven Robustness** – Successfully endured the testing phase and specified into the new coffee roaster design.

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.

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