

Application case study

PRECISION PACKAGING MACHINERY FOR THE FOOD INDUSTRY



Food & Beverage

Cartoning Machinery

Klockner has a number of precision motion control applications on cartoning machinery.

The customer was in the process of making major changes on a line of cartoning machines by switching from mechanical drive systems using a variety of levers, cams, belts and pulleys to servomotors and controls. Many of these applications required speed reducers.



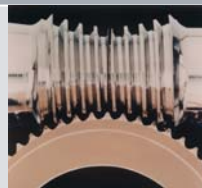
engineered to keep you moving

WhisperDrive: Series W Servo Precision Gearhead

Early on in the development of Series W, Miller Industrial and Cone Drive made presentations to Klockner Engineering, describing the advantages of right angle, double enveloping worm gearing that provides quiet, smooth, low backlash performance.

Bayside was considered first because of their well known name in the servo drive business, and due to the fact that they had some business on several existing applications. The decision to use Bayside was also based on Bayside ratings, which the customer took at face value.

Klockner placed an order for four prototype Series W with hollow output shafts. The Series W were placed on a cartoning machine that was displayed at the Packaging Machinery Show in Chicago.



WhisperDrive's Series W smoothness, stiffness, quality, and hollow output shaft coupled with a competitive price will help us keep this business. We will provide four Series W units, (3) size 51's and (1) size 76, on every cartoning machine manufactured. In addition a new pouching machine re-design is in process, and these machines will use from four to ten Series W per machine. We will also provide a number of 3.5" and 4" standard Cone Drives for other applications.

To our dismay, all four Series W leaked oil. But Cone Drive responded by turning a problem into an opportunity.

While Bayside was busy blaming motor and control suppliers when problems developed within their system, Cone Drive's total focus was toward solving Klockner's problem.

The source of the leak was identified, the problem was permanently solved, and Cone Drive earned this endorsement from Klockner's President: "We will use Cone Drive exclusively on all applications whenever possible."



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Other gearboxes considered for this application were:

Model RG

- Sizes 1.50 – 3.50 inch
- Ratios 5 to 60:1
- Backlash: 6 to 32 arcminutes



Model HP

- Sizes 1.50 – 12.0 inch
- Ratios 5 to 70:1
- Backlash: 0 to 32 arcminutes



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Customer

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