

New KWS Screw Feeder Meters
Oat Flour to Screener

Name and Location
PepsiCo Foods Canada, Inc.
Peterborough, ON

Food-Grade Screw Feeder for Metering Oat Flour

General Description

PepsiCo Canada is home to some of the world's most recognized and respected brands including Pepsi, Quaker, Tropicana, Gatorade, Lay's, Doritos, and Tostitos. They have been a leader in the Canadian food industry for over 130 years. Quaker products include everything from hot oatmeal to cold cereals and granola bars to portion control snacks and baking mixes, pancakes, and syrup. PepsiCo Canada operates two Quaker plants: Trenton (Ontario) and Peterborough (Ontario).

As part of a Quaker new bagging line, the Peterborough plant needed a screw feeder to meter oat flour from an existing 12-inch spout to the inlet of a new screener. As demand requires, the screw feeder would be run on intermittent cycles to refill a surge hopper below the screener. In their search for a reputable equipment manufacture, KWS was the ideal partner to provide the design and fabrication needs for the new line's screw feeder.

Design Parameters of Application

Product Type: Oat Flour

Material Density: 33 Lbs. per Cubic Foot

Capacity: 167 Cubic Feet per Hour

Duty: Intermittent Cycles 24 Hours per Day

Advantages Provided by KWS

PepsiCo Canada and KWS manufacture high-quality products to the same exacting standards. PepsiCo engineers provided the desired design parameters and sketches to KWS engineers for evaluation and design recommendations. KWS has specialized design standards for screw conveyors and feeders used in the food industry. KWS designed and manufactured a screw feeder for the applications completely free of pits and crevices on all product contact surfaces exceeding a CEMA IV finish.

Special Features of KWS Design

KWS engineered and manufactured a 304 stainless steel screw feeder free of pits and crevices. All internal bolted connections were eliminated, and internal surfaces and welds were cleaned, ground flush, and polished to a 150-grit finish bolstering the sanitary design requirements.

The screw feeder design included a KWS torque arm trough end to permit the drive unit to "float" on the drive shaft, eliminating any overhung load and stress on the rigidly welded screw. A pillow block roller bearing is located on the drive end to support the screw and function as a thrust bearing.

For shaft seals, KWS chose MECO HB purged, mechanical seals. MECO purgeable seals are a full-contact, mechanical seal that uses an elastomer drive to rotate bearing-grade, synthetic seal faces against fixed, stainless steel seal faces. The HB Seal cavity is charged with low-pressure air or gas, which acts as a barrier fluid to provide pneumatic seal face loading. Utilizing pillow block bearings allows for the easy access to the mechanical shaft seals for cleaning and replacement.



KWS Manufacturing

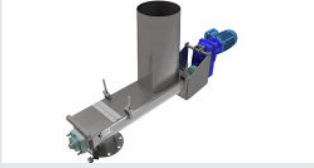
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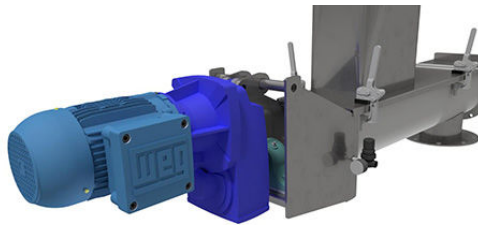
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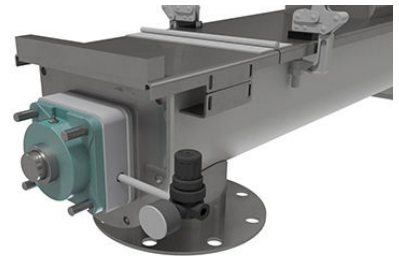
Testimonial

"PepsiCo Canada is extremely pleased with the high-quality of the KWS equipment. It is exactly what we were looking for."

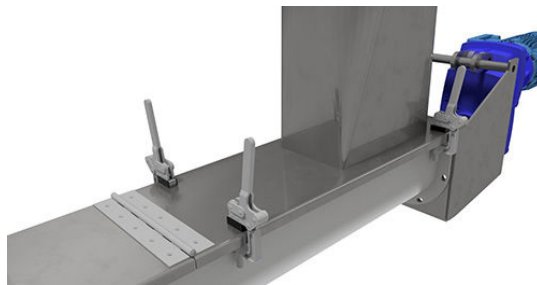
- Brian Worrall – PepsiCo Canada, Project Design Coordinator



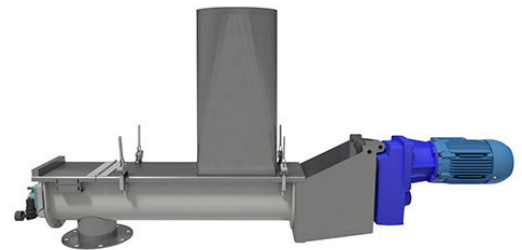
KWS Torque Arm Trough End
Allows Drive Unit to Float



MECO Purged Shaft Seals Eliminate
Loss of Oat Flour



KWS Screw Feeder Exceeds PepsiCo
Quality Standards



All Internal Surfaces Meet
Food-Grade Requirements



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