

CASE HISTORY



Weighing And Blending System for Accurately Blending of Breakfast Cereal and Nuts

Customer: WEETABIX FOOD COMPANY

From its headquarters in the heart of the English countryside, the Weetabix Food Company has been creating delicious breakfast cereals since 1932 and now employs over 2,000 people around the world. Weetabix is the leading cereal manufacturer in the U.K., offering a wide range of top-selling brands, including Weetabix and Alpen. Weetabix exports cereal to over 80 countries worldwide. In 2004 Latimer Group Limited, a company incorporated by Lion Capital, acquired all of the issued share capital of Weetabix Limited.

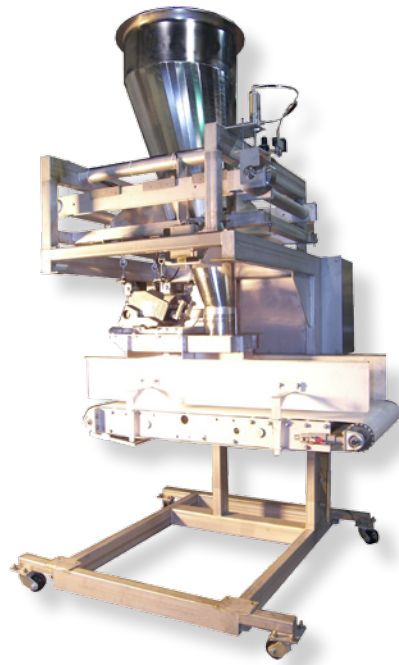
Requirement:

WEETABIX USA received a private packaging contract for manufacturing a new cereal for a major cereal supplier. The materials to be fed are extruded bran flakes and roasted sliced almonds. A requirement by the customer was to use as much of their existing material conveying and packaging line as possible which posed a big problem in that there was not enough room to squeeze in two weigh feeders, one for the bran the other for the almonds, plus a blender.

Solution:

Thayer's engineering department came up with the new "CASCADE BLENDER" that is a unique combination of a THAYER Loss-In-Weight Cable Scale with an electromagnetic vibratory feeder metering the almonds and Thayer's Model MWF-OS-24 open construction sanitary weigh belt for monitoring the bran flow. Both feeders are mounted on a common portable stand along with instrumentation. The discharge of the almonds is situated above the discharge of the weigh belt so that the two materials are blended as they cascade into the takeaway conveyor going to the packaging line.

The control scheme uses Thayer's Model S52i Integrator on the MWF-OS-24 Weigh Belt and a Series 5200 advanced capability rate controller on the Loss-In-Weight Feeder tied together in a Master/Slave configuration. The S52i Integrator takes the load and speed from the Weigh Belt and converts it into a convey rate in lb/min that is sent out to the Series 5200 controller as a 4-20mA signal. The almond feeder feed rate is then controlled by the output signal derived from the cereal feeder. The feed ratio between the two material is always on target.



THAYER Technology

Loss-In-Weight Cable Suspension System with Vibratory Feeders

Thayer Scale Loss-In-Weight feeders are designed to provide precision class accuracy and repeatability even in the harshest of industrial environments. They range in capacity from grams per minute to tons per hour.

These are the most versatile feeders in the industry. At the heart of each Loss-In-Weight Feeder is a THAYER scale that has been designed exclusively for the stringent requirements of Loss-In-Weight feeding.

Thayer Scale offers a powerful set of proprietary add-on accessories that are designed to defeat the problematic flow issues encountered by industry such as bridging, flushing, adhesion and cohesion. Comprehensive process solutions that can only come from a company with over fifty years experience.

- Thayer Loss-In-Weight Vibratory Feeders are designed to assure uniform, non-pulsating, accurate feeding of a wide range of materials, from free flowing to friable to cohesive.
- Ideal for feeding materials at very low feed rates accurately, with second to second uniformity, and without feed rate pulsations.
- Simple, low cost design makes it an excellent choice for feeding free flowing materials such as pellets or granules.
- Widely recognized as the most suitable choice for feeding delicate materials, that require gentle handling.
- Accurately measures load regardless of load position.
- Immune to support structure deflections and process vibrations.
- Inherently self aligning to gravity.
- Nulls out heavy tare loads.
- 1,000% overload capacity.
- Scale may be suspended from above or supported below.
- Immune to shock or impact loads.
- Easily accessible load cell can be serviced without dismantling the feeder.

Sanitary Weigh Belt

The MWF-OS Sanitary Open Construction Weigh Belt Feeder provides Thayer Scale accuracy, ruggedness, and reliability.

Self cleaning pulley eliminates material build-up and belt tracking problems. Unique flared skirt design prevents material spillage and assures proper feed control. Rigid scale support system provides exceptional stability, assuring accuracy without frequent re-calibration.

A standard design coupled with dimensions and rates that are tailored to each application add versatility to its capabilities. Its design for ease of maintenance and the ability to change its throughput rating gives it a long useful life in a rapidly changing industrial environment.

- Handles a wide range of materials and densities.
- Sanitary, all stainless steel construction.
- Unique belt tracking system assures positive tracking without the use of mechanical devices.
- Easy access, low maintenance design, no tools disassembly
- Excellent accuracy and stability.
- Rugged construction-built to survive.
- Cantilevered frame for fast belt removal.

