

HAPMAN CASE STUDY

Flexible Screw Conveyors

Easy-to-Clean. Cost Effective. Trouble-free Operation. Helix® is the Top Choice for Specialty Dry Bulk Food Company

By Mike Zeluff, Hapman Product Specialist

Planning for expansion is a critical step in a company's growth plans. Especially when evaluating process improvements and new equipment purchases that will support sustained growth and ensure a maximum return on the investment. That's why Florida-based Guixens Food Group turned to Hapman, relying on the company's reputation for dependable, cost-effective conveyors when it began drawing up plans to build a new facility.

Guixens Food Group's Tampa division, run by Manuel Guixens, specializes in processing and delivering specialty and imported dry food products to both chain and independent supermarkets. Guixens Food Group is a family owned and operated business, which first opened in 1993 in Miami, Florida. As business steadily increased, they made the decision to add a second location in Tampa to expand service to their growing customer base.

"We had already been using the Hapman Helix in our Miami facility for years, so we definitely knew we wanted it in the new location as well," said Guixens, whose company specializes in such popular brands as Inca Kola soft drink, La Trigueña olive oil, and Madame Gougousse jasmine rice. "Our Tampa plant was all new from the ground up, and we spec'd in a Hapman from day one."

Hapman's Helix flexible screw conveyor consists of a fixed tubular housing with an electric motor that drives a screw (also called an auger). The stainless steel screw is the conveyor's only moving part as it rotates within the casing, creating directional force that conveys material either horizontally or with inclines of up to 60 degrees at heights reaching 80 feet. Due to their relatively low cost and straightforward design, flexible screw conveyors are one of the most common types of conveyors used by manufacturers, conveying a variety of materials from rice and beans to nacho seasoning and pancake mix. When plans for the facility were being created, Guixens

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contacted Mike Zeluff – Hapman's Helix Product Specialist – for advice on which flexible screw conveyor options would work best for his process. "Manny's challenge was that he wanted to be able to use one conveyor to handle all of his materials, from an ultra-fine corn flour, to fragile dry beans," said Zeluff. "After comparing the bulk densities of the various materials, we determined the Helix series 500 was the best suited conveyor for the job. Using two interchangeable flat wire augers of different sizes allowed

Manny to successfully convey all his materials with a single conveyor without sacrificing any product quality."

Zeluff went on to explain how changing augers is a fast and easy-to-do process. The Helix is designed with exclusive T-handle couplings that allow operators to fully disassemble the conveyor from the hopper and motor in minutes. This makes it the ideal choice for facilities like the Guixens plant that need a cost-effective conveyor that's simple to use, requires little maintenance, is easy to clean, and has the operational capabilities to convey a vast array of materials.



Hapman's exclusive T-handle Couplings make cleaning and auger change outs fast and easy, allowing for convenient disassembly of the conveyor in just minutes.

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Pictured above is the Helix conveyor motor suspended from a trolley mounted to the ceiling at the Guixens Food Group plant in Tampa Florida.

The Hapman Helix flexible screw conveyor – located in the Guixens Tampa, Florida facility – is pictured conveying imported bulk rice from its integral stainless steel hopper into a packaging machine that portions the rice into pre-printed plastic bags for distribution in both local and chain grocery stores.

"We convey eight different products with eight different consistencies," said Guixens. "The Hapman is very versatile and we can tailor it to whatever process we have. The integral controls also allow us to run the screw faster for finer materials, and slower for the more fragile items such as dry beans and oatmeal. Plus, it allows us to reverse the screw for easy cleaning."

The Helix has a variety of interchangeable augers, including flat wire, beveled wire, square wire, and round wire; each designed to handle specific material characteristics without product degradation or binding. The new Guixens Foods Group facility in Tampa interchanges two types of flat wire augers with different diameters to accommodate their specific material challenges. The larger diameter screw is used for rice, oatmeal, fine and coarse cornmeal, and ultra-fine corn flour. The smaller screw is used specifically for beans to prevent breakage and ensure high product quality. "A smaller auger provides an increased allowance between

the screw and the casing, decreasing friction and creating a more gentle conveying process for fragile materials like beans, corn, coffee beans, and pasta," explained Zeluff, who added that the smaller augers are better for starting up under load and offer a smoother running cycle.

An Innovative Packaging Process Improvement

The Hapman Helix is also at the center of Guixens innovative process improvement for the Tampa facility where operations are set up in a series of work stations; each packaging a specific dry bulk material. Inspired by how meat packing plants use a trolley to easily move product about the facility, Guixens designed his own trolley system that suspends the Helix motor from the ceiling. The trolley allows employees to use a single flexible screw conveyor for multiple stations, moving it quickly from one machine to the next with very little effort.

The Tampa Guixens facility also customized the sanitation system; eliminating cross contamination between materials. The system consists of a large PVC pipe capped on both ends and plumbed to a hot water source and drain. Horizontally mounted to the wall, the system effectively uses none of the facility's valuable floor space and is completely self-contained. Operators place the Helix's UHMW polyethylene food grade conveyor casing pipe and stainless steel screw in the cleaning station, fill it with hot water and add sterilizing chemicals. The concentration is carefully monitored using test strips for verification and quality assurance. Once the process is complete, the tube and screw air dry in place and are ready for the next material application.

"I don't think any other conveyor system could give us the flexibility, ease of cleaning, and simplicity of the Hapman," said Guixens, who has been using a Helix in his facilities for many years. "It's so simple, there's nothing to go wrong."

ABOUT HAPMAN

For 70 years, Hapman has provided manufacturing plants around the world with the most technologically advanced powder and bulk handling equipment and systems, offering custom engineered equipment and systems for chemical, food, pharmaceutical, plastics, building, minerals, and other industries. For more information on Hapman, visit hapman.com

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