

Spiroflow Discharger Delivers Sugar, Rice & Corn Flour to Packaging Machine

Customer Requirements

Dublin, Ireland based **Gem Pack Foods Ltd** are both a Contract Packer and provider of an extensive range of 'Gem' and 'Gem Gourmet' products. Several of these products are simply repacked from bulk supplies but many are proprietary mixes. Their key ingredients are sugar, in various forms from granulated to fine icing grades, rice and corn flour. To keep abreast with growth in demand, Gem Pack Foods decided to have these key ingredients delivered in 1 ton bulk bags (FIBC's) rather than 55 lb. packs. This allows them to take advantage of the well documented benefits of bulk supplies. They needed a way to discharge this variety of products from the bulk bags and to deliver each of them, in the correct condition, to the appropriate feed point of their 'Fawema' packing machine. This packing machine has 2 feed points. One requires product delivered at a metered feed rate and the other has it's own auger to regulate the flow from a mass transfer system. Only one feed point can be in operation at any time. Either way, product fed to the packing head has to have a consistent flow and has to be de-aerated within specified tolerances.

Spiroflow Solution

To deliver all the products, which have very different flow characteristics, to the packer in the required condition, Spiroflow's suggested solution was to supply one of our Model T6 Bulk Bag Dischargers with a Flexible Screw Conveyor (which delivers product at a metered rate) and a Vacuum Conveyor (which is a mass transfer system). Each conveying system is mobile so the change-over between the two is a quick and easy operation. In the words of the Engineering Manager at Gem Pack Foods, 'It's a good piece of kit!'

The Bulk Bag Discharger is installed on a mezzanine floor within the main packing hall and, as a result, Bulk Bags are delivered by a pallet truck rather than a forklift truck. Accordingly, the discharger is furnished with its own lifting beam and travelling hoist to facilitate the easy positioning of full bags into the discharger. However this cannot happen before either the Flexible Screw Conveyor or Vacuum Conveyor are in position below the discharger and it's umbilical cord is connected to the electrical control panel. The loops of each bag are attached to a lifting frame that ensures the bag is lifted squarely into place. Once in place, bags sit on a substantial support dish while being stretched vertically by the compression springs within the side arms that support the lifting frame. This stretching helps to ensure total discharge of the bags' contents. The support dish houses 'base massagers' that can be operated when product is compacted.

