



Cone Valve Bin Discharger Solves Silo Discharging Problem

Manufacturer – Carolina Conveying

Product – Flour

Case History #104

Background

In 2001 a large NC bakery contacted Carolina Material Technologies (CMT) looking for a reliable solution to discharge flour from their existing silos.

Existing Problem

The bakery had been using a *live bottom screw system* at the outlet of their 12' diameter x 40' tall silo for many years. **Air cannons and vibrators had been added to the silo cone, in the past, to aid product flow. The discharge was inconsistent and unreliable, often requiring operator interface (hammers).** This discharger also caused “dead” areas in the silo, which is unacceptable due to “living organisms” contained therein.

The Solution

The company contacted CMT while searching for a solution. Their needs included:

- Continuous and consistent discharge on demand.
- Promotion of Mass Flow
- Minimal to no maintenance.



CMT reviewed numerous options with the bakery, including standard bin dischargers. In the end Carolina Conveying's Cone Valve Discharger, the Soliflo™, was chosen as the best long-term solution. This unit is bolted directly to the silo, eliminating the flexible sleeve associated with a standard bin discharger. The Soliflo™ provides two functions as well: 1) A bin activator and 2) A valve, as it completely stops product flow when closed.

When discharge is required a heavy-duty Firestone air bellow, fitted within the underside of the cone, is filled, raising the cone into the silo. This action physically breaks any bridges that may occur. Material discharges through the annular gap of the cone valve, created when it is raised, discharging product into the downstream equipment. When discharging is complete the cone valve closes, against the silo cone walls, preventing any material from discharging from the silo.

Results

- The Soliflo™ was installed in July of 2001.
- One problem was experienced, due to a rotary valve-venting problem, in 2003.
- The Soliflo™ Cone Valve Discharger has provided consistent and reliable discharging from day one, without the need for any maintenance or operator interface.

Experience the CMT Difference

704-846-3737 - www.cmtnc.com

