



Typical Aero Mechanical conveyor installation with one unit transferring to another



Type 2 Bulk Bag Unloader

Customer Requirements

A manufacturer of construction industry products needed to replace its existing mixing machine and packaging line feeding system that was not meeting its expectations.

The company, based in Phoenix, AZ, supplies a vast range of private label dry package grouting, cement and cement mixes. These products are specifically designed to perform in the unique climatic conditions of the West Coast.

- The company processes additives mixed with different grades of sand.
- These additives are then packaged and sold to consumers in 22lb/ 10kg or 55lb/ 25kg bags.
- The additives can be bulky and arrive at the plant in bags as large as 4,000lb/ 2000kg or as small as 55lb/ 25kg.

Spiroflow Solution

Spiroflow installed two Type 2 Bulk Bag Unloaders and two Model PC3 Aero Mechanical Conveyors. The equipment was custom designed to fit the available space and two heavy-duty rotary feeders were used to control the product flow rate from the unloaders into the conveyors. The customer's production targets ranged from over 12,000lb/ 5,000kg to 15,000lb/ 7,000kg per hour.

- Both Type 2 unloaders are used to dump additives from bulk bags.
- One was fitted with an optional integral bag dump station for minor ingredients which were added from 55lb/ 25kg bags.
- The unloaders were also custom designed to handle poor flowing materials (including moist sand) and to provide the customer an easy way to control the discharge capability.
- The unloaders can operate simultaneously from two separate bulk bags or from a single bulk bag with additives from smaller bags.
- Additionally only one operator is required to operate the new system instead of three or four with the previous system.
- An integral part of each unloader is that materials dispensed from bulk bags fall into a customized collection hopper.
- Heavy-duty rotary valves meter the contents into an Aero Mechanical Conveyor, which operates at an angle of 10° to horizontal.
- The AMC has two inlets and feeds materials from both unloaders to a second AMC that operates vertically to transfer materials into a separate mixer.
- AMCs are specifically designed to operate at any angle between 0° and 90° without any loss in capacity, as evident by the company's near horizontal unit feeding directly into a vertical unit of the same cross-section.

How Can Spiroflow Help Your Business?

Contact us today to discuss your specific applications and needs.