PRODUCT CONFIGURATIONS



M-0708

Weigh Batching/Blending System with Bag Dump Station, Bulk Bag Unloaders and Flexible Screw Conveyors





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Weigh Batching/Blending System with Bag Dump Station, Bulk Bag Unloaders and Flexible Screw Conveyors

Conveys bulk ingredients from manual and automatic unloading equipment, weigh-batches and blends the material, and delivers it for automated weigh-filling in bulk bags

This automated, gain-in-weight batching and blending system from Flexicon conveys bulk ingredients from manual and automatic unloading equipment, weigh-batches and blends the material, and delivers it for automated weigh-filling in bulk bags.

Systems such as this can interface with a variety of existing bulk handling and process equipment. Material sources can range from manually filled hoppers and drum dumpers to rail cars and roof-mounted silos. Virtually any new or existing plant equipment in any interior or exterior plant location can be integrated into a fully automated weigh batching system.

The system pictured is comprised of a manual dumping station and two bulk bag unloaders, one that employs a cantilevered hoist and trolley for loading bulk bags, the other a forklift. These units feed ingredients to a central weigh hopper by means of Flexicon flexible screw conveyors (also known as a helix conveyors, screw conveyors, spiral conveyors or auger conveyors) that are linked to the hopper's load cells via a central programmable controller.

The controller starts and stops each conveyor to weigh batch each ingredient in sequence, opens a hopper discharge valve to unload the batch into a blender, then closes the valve, facilitating concurrent weighing of a subsequent batch and blending of the discharged batch. At the completion of each cycle, the blender discharge valve is opened to fill a surge hopper, then closed to accept another weighed batch for blending.

A separate programmable controller for the bulk bag filling portion of the system actuates a fourth conveyor to elevate material and feed a bulk bag filling machine at maximum rate. Filling machine load cells transmit gain-in-weight information to the controller which, as the bag nears its target weight, reduces the feed rate to dribble, stopping the conveyor once the accurate bag weight is reached.

The conveyors employed in the system elevate and feed a full range of freeand non-free-flowing materials—from products that pack, cake, bridge, smear, or fluidize to those that separate—with the consistency and capacity needed for rapid bag filling, as well as the steady dribble-feed rates required for accurate weighments.

Flexicon bulk bag unloaders are equipped with FLOW-FLEXER® bag activators to promote consistent and complete discharge of both free-flowing and non-free-flowing materials from the bag.

The bulk bag filler is equipped as standard with: manual fill head height adjustment to accommodate all popular bag sizes; pneumatically retractable bag hooks; inflatable connector to seal the bag inlet spout; and feed chute outlet port for dust-free air displacement during filling. Performance can be



Automated system can interface with a variety of existing bulk handling and process equipment

enhanced by adding: powered fill head height adjustment; inflator to expand the bag prior to filling; automated vibratory densification/deareation system to stabilize the bag; and powered or gravity roller conveyor.

Weigh batching and blending systems are offered in carbon steel with durable industrial finish, or stainless steel designed, constructed and finished to industrial, food, dairy or pharmaceutical standards.