

# X-0452

# Plant-wide Weigh Batching System



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# **Plant-wide Weigh Batching System**

This automated Plant-wide Weigh Batching System engineered by Flexicon Corporation simultaneously weighs up to seven major ingredients received in bulk bags and unlimited minor ingredients received in 50 lb (23 kg) sacks, pails or boxes, and conveys weighed batches to a downstream blender that feeds a bulk bag filler and a paper sack filling machine.

System components supplied by Flexicon include: five loss-of-weight BULK-OUT® bulk bag dischargers with large surge hoppers and rotary airlock valves; two loss-of-weight BULK-OUT bulk bag dischargers with small surge hoppers and flexible screw conveyors (also known as a helix conveyors, screw conveyors, spiral conveyors or auger conveyors); two loss-of-weight bag dump stations with flexible screw conveyors; a check-weighing hopper; a TWIN-CENTERPOST<sup>™</sup> bulk bag filler; a PNEUMATI-CON® dilute-phase pneumatic conveying system including blower, filter receiver and conveying lines; and a programmable controls package.

Each of the large surge hoppers accommodates the entire contents of a bulk bag containing a major ingredient, affording operators sufficient time to load full bags into the frame as material is removed at high rates through a common pneumatic line terminating at the filter receiver.

The smaller surge hoppers on the loss-of-weight BULK-OUT bulk bag dischargers provide sufficient capacity to allow reloading of major ingredients conveyed at lower rates by small diameter flexible screw conveyors, providing higher accuracy than possible with large rotary airlocks. Also conveyed by loss-of-weight flexible screw conveyors are minor ingredients which are dumped manually at either of two dumping stations equipped with vacuum filtration systems to contain airborne dust. All flexible screw conveyors discharge into a common check-weighing transition hopper mounted on load cells that confirms batch accuracy before feeding the material through a rotary airlock into the aforementioned pneumatic line.

The filter receiver discharges weighed material into a mezzanine-level, high capacity blender mounted on load cells, providing confirmation of final batch weight. Blended batches are gravity discharged into the paper sack filling machine or the bulk bag filler, both at floor level.



Up to seven major ingredients and unlimited minor ingredients are weigh batched simultaneously, check-weighed, and conveyed mechanically and pneumatically for delivery through a filter receiver to a blender that feeds a bulk bag filler and a paper sack filler.