



# WEIGH BATCHING AND BLENDING SYSTEMS



**1-888-FLEXICON • SALES@FLEXICON.COM**

# Flexicon® Weigh Batching and Blending Systems

Virtually any bulk material, from any upstream source, to any downstream destination

Whether you are sourcing material from bulk bags, silos, manual dumping stations, process equipment or all of the above, weigh batching one ingredient or 50, blending your recipe, filling containers, and/or delivering it to process vessels, packaging lines, or any other destination, Flexicon has the comprehensive selection of equipment you need for a total weigh batching solution.

From individual loss-of-weight bulk bag weigh batch dischargers to automated gain-in-weight batching/blending systems integrated with your upstream and downstream equipment, Flexicon offers you the entire range of specialized equipment—and the engineering talent—required for a smooth start-up and efficient performance.

Equally as crucial to your weigh batching success is the proven ability of Flexicon equipment to move your material—at high rates for fast batching cycles and at steady dribble-feed rates for highly accurate weighments—and to deliver recipes with no separation of blended materials and no exposure to potential contamination.

Whether your ingredients are free-flowing pellets, powders that pack, bridge or smear, materials that fluidize, or blends prone to separation, Flexicon can move them positively, weigh them accurately, and deliver them in prime condition.



*Flexicon's Self-Contained, Gain-in-Weight Batching and Blending System conveys bulk ingredients from multiple upstream sources, weigh-batches, blends and discharges the material into a surge hopper, and transports it to a TWIN-CENTERPOST™ Bulk Bag Filler. The system is offered with Flexicon Flexible Screw Conveyors (shown), FLEXI-DISC® tubular cable conveyors or PNEUMATI-CON® Pneumatic Conveying Systems.*



*Flexicon's Bulk-Bag-to-Rigid-Bin Weigh Batching System seals against the clean side of the bag spout, elongates the bag for total evacuation, and allows dust-free retying of partially empty bags. A low-profile de-lumping device breaks up agglomerates as a gravimetric feeder loads accurately weighed batches into rigid bins.*

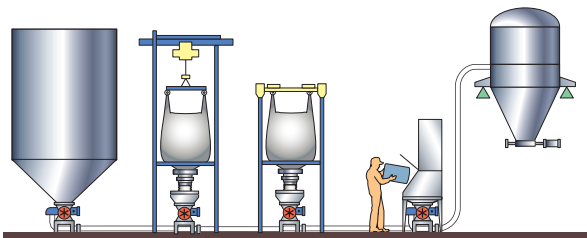
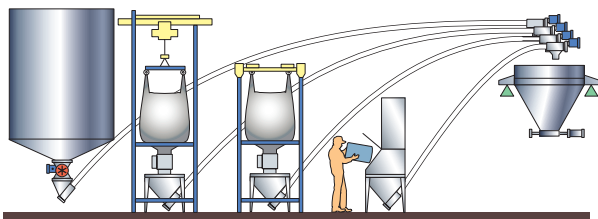


*This Automated Weigh Batching System conveys material from Flexicon bulk bag dischargers via Flexicon flexible screw conveyors to a weigh hopper mounted on load cells at mezzanine level. Weighed batches are automatically discharged through a rotary airlock valve into a Flexicon Pneumatic Conveying System, transporting the pre-weighed batch to a blender.*

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## Simple or Sophisticated Batch Control

### Gain-in-Weight Systems



*Flexicon mechanical (above) and pneumatic (below) Gain-in-Weight Batching Systems transport material from any source to a hopper, blender, or other equipment mounted on load cells.*

Flexicon Gain-in-Weight Batching Systems convey bulk ingredients mechanically or pneumatically from any location to a central receiving vessel mounted on load cells. The receiving vessel can be a hopper positioned above a blender, reactor, or other process equipment, or it can be the equipment itself.

When the batch sequence is initiated by a manual start button or automated signal, a programmable controller

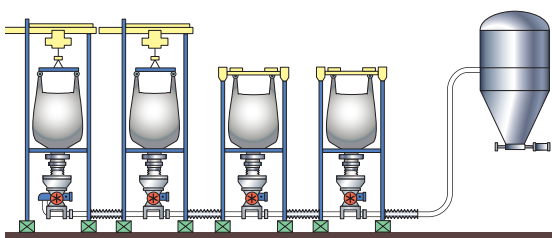
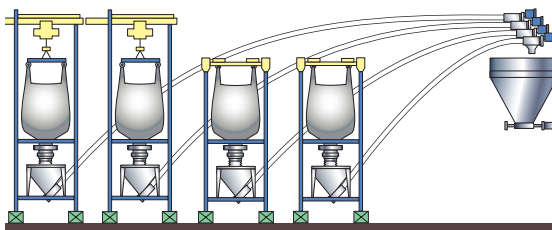
activates the first mechanical conveyor or rotary airlock valve to begin loading the first ingredient into the receiving vessel at maximum feed rate.

For greater accuracy, the controller steps-down the feed rate to dribble prior to reaching the target weight. To compensate for material-in-flight, the mechanical conveyor or rotary airlock valve is stopped immediately before the target weight is reached.



*The Gain-in-Weight Batching System at left weighs a major ingredient supplied in bulk bags, and a minor ingredient dumped manually. The controller starts and stops the conveyors to weigh each material in sequence, and actuates a slide gate valve to discharge the batch. The system at right conveys material from four BULK-OUT® bulk bag dischargers to a weigh hopper which discharges into a blender. Blended batches can be discharged into shipping containers (shown) or process equipment.*

### Loss-of-Weight Systems



*Flexicon mechanical (above) and pneumatic (below) Loss-of-Weight Batching Systems transport material from one or more bulk bags to a common hopper, blender, conveyor, shipping container, or any process vessel.*

Flexicon bulk bag Loss-of-Weight Batching Systems consist of a BULK-OUT® bulk bag discharger mounted on load cells which measure weight loss of each discharger during the batching cycle and transmit the information to a system controller.

The batch sequence is initiated by a manual start button or automated signal. As the conveyor unloads material at maximum feed rate, the load cells transmit loss-of-weight

information to the controller, which reduces the feed rate to dribble immediately prior to stopping the mechanical conveyor or rotary airlock valve once the target batch weight has been unloaded. System software permits mid-batch bag changes.

Multiple weigh batch dischargers can each convey a different ingredient to a central discharge point such as a hopper, blender, reactor, or other process equipment.



*The Loss-of-Weight Batching System at left discharges one or more bulk bags while weighing the material and conveying the batch directly to any process vessel. Load cells transmit the amount of weight lost to a controller, which stops the conveyor once the target batch weight has been reached. The system at right conveys material from two Flexicon bulk bag dischargers into a filter receiver which discharges into a blender. The manual bag dump station allows the addition of pre-weighed minor ingredients to the batch.*

# Configurations (Page 1 of 3)



*Pneumatic Weigh Hopper  
with Fill/Pass Valve*



*Bulk Bag Weigh Batch Unloader  
with Seismic Bracing*



*Sanitary Bulk Bag  
Weigh Batch Unloader*



*Bulk Bag Weigh Batching System  
with Integral Tubular Cable  
Conveyor*



*Discharger Dust Containment  
Enclosure Contains Bag Spout  
Leaks and Spills*



*Pneumatic Weigh Filling System*



*Weigh Batching System  
for Bulk Bag Discharging,  
Manual Dumping*



*Weigh Batching System  
with Bulk Bag  
Dischargers, Educator*



*Sanitary Bag Dump Weigh  
Batching with Flexible  
Screw Conveyor*

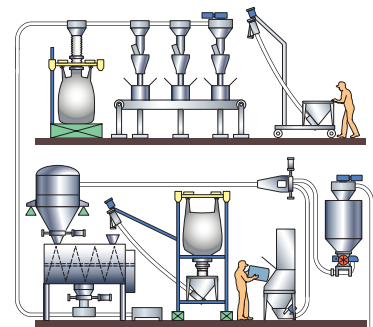
# Configurations (Page 2 of 3)



*Weigh Batching from  
Manual Dump Station to Bins*



*Weigh Batching from Bulk  
Bag Discharger to Rigid Bins*



*Engineered, Integrated  
Bulk Handling Systems*



*Loss-of-Weight Batching  
System for In-Line  
Pneumatic Conveying*



*Pneumatic Gain-in-Weight  
Batching and Blending System*



*Bulk Bag Filler with Pneumatic  
Material Feed System*



*Weigh Batching System  
with Low-Profile  
Flexible Screw Conveyors*



*Weigh Batching System  
with Pneumatic and  
Mechanical Conveying*



*Gain-in-Weight Batching,  
Blending and Filling System*

## Configurations (Page 3 of 3)



*Weigh Batching and Blending  
System with Bulk Bag Filling*



*Weigh Batching and Blending  
System with Conveyors*



*Continuous Loss-of-Weight  
Discharging from Bulk Bags*

# Broad Range of Bulk Handling Equipment and Systems



**FLEXICON® Flexible Screw Conveyors** transport free- and non-free-flowing bulk solid materials from large pellets to sub-micron powders, including products that pack, cake or smear, with no separation of blends.



**FLEXI-DISC® Tubular Cable Conveyors** gently slide friable bulk material through smooth stainless tubing at any angle to single/multiple points.



**PNEUMATI-CON® Pneumatic Conveying Systems** move a broad range of bulk materials over short or long distances, between single or multiple inlet and discharge points in low to high capacities.



**SWING-DOWN®, REAR-POST and TWIN-CENTERPOST™ Bulk Bag Fillers** can fill one bulk bag per week or 20 per hour at the lowest cost per bag. Numerous performance options.



**BLOCK-BUSTER® Bulk Bag Conditioners** loosen solidified material. Variable height turntable positions bag for conditioning on all sides at all heights.



**BULK-OUT® Bulk Bag Dischargers** unload free- and non-free-flowing solids from bulk bags automatically. Allows untying, discharging, retying and collapsing.



**FLEXICON® Manual Dumping Stations** allow dust-free dumping of bulk material from bags and other containers. Automatic filter cleaning allows continuous, efficient operation.

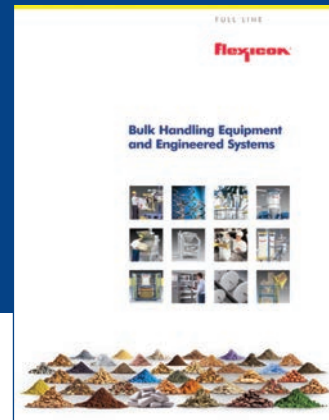


**TIP-TITE® Container Dumpers** empty bulk material from drums into vessels up to 10 ft (3 m) high. Dust-tight (shown) or open chute models.



**FLEXICON® Weigh Batching Systems** weigh and blend bulk ingredients automatically. Gain-in-weight (shown) and loss-of-weight systems available.

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*Flexicon products are manufactured on four continents, and marketed through an extensive sales network throughout Europe, Australia, Southeast Asia, Africa and North/Central/South America.*

HH-07281

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