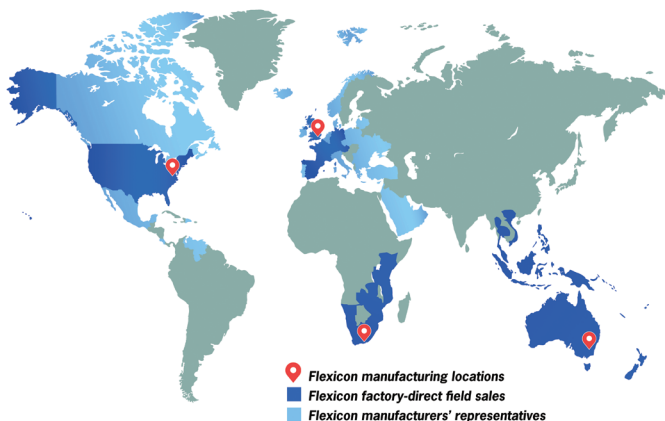




Blended material flows from a bulk bag into the floor hopper of a flexible screw conveyor, which discharges into a vibratory separator discharging into a packaging machine.

Food Ingredient Distributor Enhances New Manufacturing Revenue Stream with Bulk Bag Handling Equipment

GG-0599



flexicon®

USA

FLEXICON CORPORATION
Tel: +1 610 814 2400
E-mail: sales@flexicon.com
Web: www.flexicon.com

UK

FLEXICON (EUROPE) LTD
Tel: +44 1227 374710
E-mail: sales@flexicon.co.uk
Web: www.flexicon.co.uk

AUSTRALIA

FLEXICON CORPORATION
(AUSTRALIA) PTY LTD
Tel: +61 7 3879 4180
E-mail: sales@flexicon.com.au
Web: www.flexicon.com.au

SOUTH AFRICA

FLEXICON AFRICA (PTY) LTD
Tel: +27 41 453 1871
E-mail: sales@flexicon.co.za
Web: www.flexicon.co.za

SPAIN

FLEXICON EUROPE SPAIN
Tel: +34 930 020 509
E-mail: ventas@flexicon.es
Web: www.flexicon.es

FRANCE

FLEXICON EUROPE SAS
Tel: +33 7 61 36 56 12
E-mail: ventes@flexicon.fr
Web: www.flexicon.fr

GERMANY

FLEXICON EUROPE GmbH
Tel: +49 173 900 78 76
E-mail: vertrieb@flexiconeurope.de
Web: www.flexicondeutschland.de

SINGAPORE

FLEXICON SINGAPORE PTE LTD
Tel: +65 6778 9225
E-mail: sales@flexicon.com.sg
Web: www.flexicon.com.sg

INDONESIA

FLEXICON SINGAPORE PTE LTD
Tel: +62 81 1103 2400
E-mail: sales@flexicon.co.id
Web: www.flexicon.co.id

Food Ingredient Distributor Enhances New Manufacturing Revenue Stream with Bulk Bag Handling Equipment

BUDD LAKE, NJ — KB Ingredients has sourced, mixed, packaged, and distributed ingredients to the baking and food processing industry since 2003, and currently operates a production facility in New Jersey and an international distribution center in Puerto Rico.

“We’re a food ingredient manufacturer specializing in dough conditioners, bakery concentrates, premixes, and toll dry blending,” says CEO Brad Keating. “We do liquid processing and repackage liquid sweeteners, as well.”

Adding manufacturing to distribution

Originally a distributor, KB Ingredients added manufacturing capability in 2015, offering customized ingredient blends, pre-mixed dough conditioners, and toll blending.

To house the new manufacturing line, the company erected a mixing production room with a 28 ft (8.5 m) ceiling at its New Jersey facility.

For the new space, it purchased three ribbon blenders to mix combinations of dry ingredients, including flours, sugars and fine granular products, as well as a packaging line to fill, heat-seal and palletize 50 lb (23 kg) bags or cartons.

Staging and storing of blended material in bulk bags prevents bottleneck

Since the combined output of the ribbon blenders exceeded that of the packaging system, KB Ingredients optimized its productivity by storing blended material in bulk bags for subsequent packaging. Each blender now discharges mixed product into palletized bulk bags which weigh 1000 to 2500 lb (454 to 1136 kg) depending on material density, for storage and subsequent packaging. This change allows independent scheduling of its blending and packaging processes.

As dictated by the production schedule, bulk bags of blended products are automatically unloaded and fed to the packaging line using a Bulk-Out® BFF bulk bag discharger supplied by Flexicon Corp. An operator slides the bag’s four lifting straps into Z-Clip™ strap holders on the bag lifting frame, which is raised by forklift and placed into top-mounted receiving cups atop the frame’s four posts.

The operator then connects the bag spout to a Spout-Lock® clamp ring which creates a sealed connection between the clean side of the spout and the clean side of a Tele-Tube® telescoping tube, protecting the integrity of the blended mixture. As the tube then lowers, it keeps the spout taut, promoting flow and total evacuation while preventing dust. The discharger also includes Pop-Top™ upper frame extension arms that raise and elongate the bag as it empties to further promote complete discharge.



The company's second bulk bag discharger, with screener integrated into the frame, discharges blended material into a hopper above a packaging machine.



The blended material flows from the bulk bag into an 8 cu ft (227 l) floor hopper designed for powdery, semi-free-flowing materials. A pneumatic turbine vibrator on the hopper aids flow. The hopper feeds a 15 ft (4.6 m) long, 4.5 in. (114 mm) O.D. flexible screw conveyor inclined at 45°, which transfers material to a 12 in. (305 mm) diameter circular separator mounted above another hopper, from which the product gravity feeds to the packaging machine below.

Staging and storing of blended material in bulk bags prevents bottleneck

To provide redundancy, the company added a second model BFF bulk bag discharger in 2017. “At the time, we didn’t need the capacity,” says Keating, “but now our volume is picking up to where we’re utilizing them both.”

The second system incorporates the bulk bag discharger, a 24 in. (610 mm) diameter vibratory screener and a packaging machine, all stacked in a 17 ft (5.2 m) high discharger frame. The high ceiling in the process room allows this arrangement, Keating points out, minimizing footprint. A bulk bag is loaded into the discharger by forklift as with the original discharger, except the operator climbs a step ladder to access the higher bag spout connection.

To control flow to the sifter, the bag spout interface is fitted with a Power-Cincher® flow control valve containing four elliptically shaped cincher bars that converge and overlap to allow partial or complete closure of the bulk bag spout. The discharger also incorporates Flow-Flexer® bag activators that raise and lower opposite bottom edges of the bag to promote material flow and total evacuation.

Maintaining and cleaning the bulk bag systems

“The systems are essentially maintenance-free with few moving parts,” says Keating. “The only thing on the flexible screw conveyor that you have to maintain is the 3 hp (2.2 kw) motor.”

“We are cautious about cross-contamination because allergens are present,” Keating says. Cleaning takes two to three hours, including the hoppers, flexible screw conveyor, screeners and packaging machine. KB Ingredients uses the original discharging system with flexible screw conveyor for longer production runs where changeover time has less impact, and the newer discharging system for shorter runs.

KB Ingredients

(973) 426-9100

www.kbingredients.com



A forklift places the bag and lifting frame onto the Bulk-Out® BFF bulk bag discharger frame.



An operator secures the bag spout with a Spout-Lock® clamp ring positioned atop a Tele-Tube® telescoping tube that lowers, keeping the spout taut to promote flow and total evacuation.



Material exits the conveyor below the point at which it is driven, preventing contact with seals or bearings.



Material discharged from the flexible screw conveyor is screened before being fed to a packaging machine.



KB Ingredients packages and ships blended ingredients to the baking and food processing industries.

flexicon®

USA

FLEXICON CORPORATION
 Tel: +1 610 814 2400
 E-mail: sales@flexicon.com
 Web: www.flexicon.com