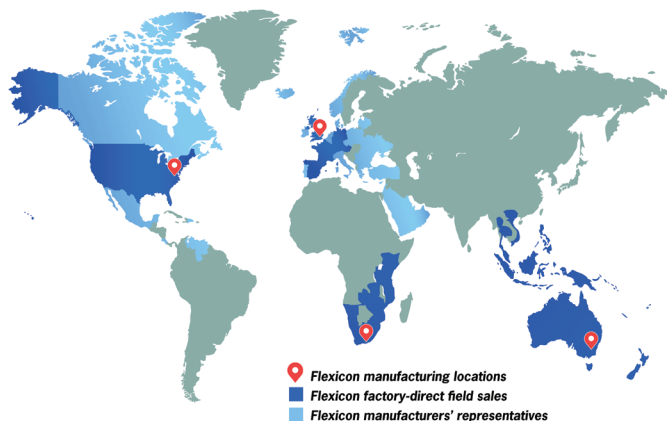




Operators wheel the filled tote over to a mechanical tipper, which unloads the contents into the conveyor's hopper.

Lone Star Bakery Automates Dessert Production with Flexicon Screw Conveyor

TFC25-194



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

Lone Star Bakery Automates Dessert Production with Flexicon Screw Conveyor

CHINA GROVE, TX — From its humble roots as a neighborhood bake shop in the late 19th century, Lone Star Bakery has grown into a powerhouse of commercial baking, now employing more than 650 people in a pair of facilities in China Grove, Texas. The company produces millions of baked goods each week—including fruit and savory fried pies, buttermilk biscuits, kolaches, cup desserts, cinnamon buns, pecan rolls, and chocolate chip cookies. Some of the most recognizable brands in the world receive their baked goods from Lone Star.

Due to their reputation for excellence, Lone Star was awarded a contract by a multinational fast-food chain to produce a new line of cheesecake in a cup. Each cup featured a base layer of either graham cracker crumbs or an Oreo mix, which was compressed into individual cups, and then topped with a cheesecake and fruit filling swirled into the cup.

“It was a brand-new product for them, and no one was sure how it would perform in the market,” said Mike Brehm, Chief Engineer at Lone Star. “Initially, everything was done manually. We mixed the crumb bases in tubs, and our team hand-scooped the mix into each cup. It was extremely labor intensive.”

When the client confirmed the product’s success, Lone Star knew it was time to automate.

“The cup filler line was designed by ATS with an All-Fill crumb depositor attached,” Brehm explained. “We needed an efficient way to feed the crumb depositor, and they recommended Flexicon—so we reached out.”

Flexicon provided the ideal solution: a Portable Flexible Screw Conveyor. Today, the crumb base is blended in a mixer and discharged into a portable tote. Operators wheel the filled tote over to a mechanical tipper, which unloads the contents into the conveyor’s hopper.

The screw conveyor features a stainless-steel spiral enclosed within a polymer tube. Designed for dust-free operation, it uses an electric motor positioned beyond the discharge point to rotate the spiral, which moves material upward at an angle from the receiving hopper into the depositor. The spiral is the only moving part that contacts the material and self-centers as it rotates, minimizing wear and simplifying maintenance.

Both crumb bases consist of fine particles with a mix of oil and fats included for cohesiveness. As a result, both require additional activation to keep them flowing. Based on material samples Lone Star supplied Flexicon, the company specified a vibrator for the hopper wall and a mechanical agitator above the charging adaptor of the conveyor. These additions, along with the specialized geometry of both the hopper and the spiral, all help to keep the semi-free flowing material moving.



The cheesecake in a cup is one of the Lonestar customer’s most popular offerings.



The blended graham cracker crumbs fill the flexible screw conveyor’s hopper.



The Flexicon conveyor delivers a reliable flow of material to the cup filler system, keeping production on schedule.



A Flexicon built and programmed NEMA 4X stainless steel control enclosure protects the electrical components during washdowns and in humid environments.

Mounted on casters for mobility, the conveyor can be moved between processing lines as needed, reducing the requirement for multiple fixed systems. It also rolls easily to wash-down stations for quick cleaning between product changeovers. A NEMA 4X stainless steel control enclosure protects the electrical components during washdowns and in humid environments.

“Our operators are very happy with the conveyor,” Brehm said. “When they see that the hopper is running low on mix, they press the button to activate the mechanical tipper, which dumps the tote’s contents into the hopper. Flexicon also provided the integration between the crumb distributor and the conveyor, so that if the distributor is running low on mix, it signals the conveyor to turn on and fill it back up. We’ve seen both a reduction in labor and an increase in throughput.”

Lone Star was able to have the conveyor up and running quickly. “It was very simple,” said Brehm. “Flexicon included an installation manual which was easy to follow. They (Flexicon) are great to work with. Having a dedicated Project Manager was key, as we had a few change orders after we signed off. Everything went smoothly; they did a great job communicating with us.”

“We’re looking at the possibility of adding another production line in another year or so, and we’ll definitely be giving Flexicon a call,” he said.

Lone Star Bakery
China Grove, TX
www.lonestarbakery.com



Seeking a reliable way to feed its cup filling system, Lone Star chose a Flexicon conveyor recommended by the filler equipment supplier.



Designed for mobility within the plant, the castor-mounted Flexicon system includes a steep-walled hopper, level sensor, and vibratory sidewall activation device to promote the flow of sticky materials.



Mike Brehm Chief Engineer, Lone Star Bakery



Lone Star Bakery



USA

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