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Two-sided coding's a piece of cake

Mother's Kitchen ends foot-of-the-line drag, adopting new corner wrap labeler for corrugated shippers to gladden some customers and double its output.

Bernard Abrams, Eastern Editor

Don Butte is a hard man to satisfy. Having run Kraft Foods worldwide engineering for more than three decades, he has specified more packaging equipment than many people know exists.

So when Butte—president since 1998 of Mother's Kitchen, the Burlington, NJ-based company said to be the nation's leading cheesecake marketer—detects foot-of-the-line drag on several of the nine packaging lines in his new 105,000-sq-ft plant, he frowns.

The drag derives from bar codes and other data applied to corrugated shippers by ink-jet printers. Many of the institutional and some retail customers started requiring scannable codes on adjacent sides of the shippers. Since made-to-order products and packaging presently account for some 40 percent of volume, Butte says the company listened closely and responded quickly when they received requests for two-sided labeling of the shippers. "We were trying to spin the boxes for a second run-through, applying labels by hand, you name it," he tells PD during a recent trip to the plant.

These methods simply aren't efficient, especially with the considerable variety and sizes of cheesecakes packed under the Mother's Kitchen brand and private labels, which are a growing part of the company's business. All are packaged within the context of scheduling relatively short runs. Having the nine packaging lines translates into a high degree of dedicated output, but the same problem remains: satisfying the need for two-sided coding while keeping the machines running at an acceptable rate.

Additional pressure for higher throughput comes with the expansion early last year of blending, baking, cutting and freezing capacity. This is done to keep pace with growing demand for the cheesecakes in midwestern and western markets, not to mention sales in the Caribbean area and Far East, including Japan, Korea and Thailand, which have kept company sales growing in double digits each year since 1996.



Butte's solution is a wraparound labeler that prints and automatically applies a pressure-sensitive label to two sides of each shipper. It's Loveshaw's Little David Corner Wrap Labeler, acquired through Shrink Packaging Systems Corporation. With the first installed just more than a year ago and the second less than two months later, a new era of efficiency has been well-launched in the plant.



the bases of clear food-grade vinyl thermoforms and then cased.

He notes that the two-shift operation in a 10-hour day, four-day week is now closer to its goal of 40,000 cheesecakes a day, since the label applicators are basically doubling per-line output simply by allowing a smoother flow through the packaging lines. "And," he adds, "it's not just performance but also reliability and bar code readability that are the criteria that have to be met."

Versatility built in

With line #1 down for maintenance during PD's visit, the second installation of the new labeler on line #3 is a natural choice, especially since it vividly demonstrates Butte's decision to build versatility into every linear foot of manufacturing space. On line #3, there is even a provision for starting the packaging operation two-thirds of the way to its end.

The line also has a rather unusual feature: duplication of functions. It has to do with the way the cheesecakes are prepared after baking, tool-cutting, insertion of the separating tissues and freezing. Loaded onto the belt conveyor, the cakes being packaged during PD's visit are a 10-in.-dia variety pack

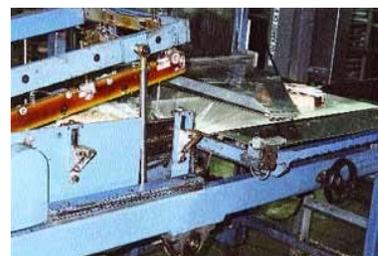
consisting of three-each—black forest, strawberry, marble and almond.

As they move gently downstream, they engage a continuous-motion wrapper, Model 1000 from TPA Equipment Systems. Rated to the machine uses only two hand dials for quick height and width adjustments. It also features a temperature-controlled solid-bar sealer for strong seals of the film, **a DuPont 60-ga polyethylene**. As they emerge from the shrink wrapper, the cakes then travel immediately through the shrink tunnel, TPA's T-1000. There is then a 7-ft hiatus for conveyance to the next station, which consists of exactly the same shrink-wrapping system.



visit are

shrink 40/min,



Frozen cheesecakes, top, emerge from the shrink tunnel of the packaging line, which now operates at a 20/min rate. A shrink wrapper/tunnel, above, for unit cheesecakes is one of two machines on the line; the second wraps cartons where needed.

Explains packaging room manager Enrique Nieves, "We use the second shrink wrapper for cartons that identify either Mother's Kitchen or private-label cheesecakes. We put the product into the cartons by hand in the space between the two machines, so the flow is very smooth. If we don't need them for the product, we can just shut them down and let the cheesecakes convey to the next station."

At that station is the real start of the packaging line during PD's stay. Here, four people at a loading table manually insert the cheesecakes into transparent domes with friction-fit bases; these are 20-mil

food-grade vinyl thermoforms with 17 1/2-mil bases of the same material, produced by Anchor Packaging, nested on the table. Incidentally, on another line, the company also loads individual cheesecake wedges into similarly thermoformed, 24-mil hinged clamshells from Package Development Corp. for convenience-store and other unit sales.

Building a case

With one person manually erecting the shipper, a 275#-test doublewall C-flute RSC supplied by Regal Box, the others inspect the cheesecakes, fill and close the domes, and load six of them into each container. They then convey in the length direction through a Signode Gemini case taper also purchased through Shrink Packaging Systems Corporation, where the top flaps are plowed closed, and a multisourced clear tape is applied.

Striking simplicity marks the entry of the cases into the Little David printer/applicator. Only an opposing guide with manual adjustment is needed to lead them into proper orientation in the machine, where they are detected by photoelectric proximity sensors. As they align with the applicator, data are printed on pressure-sensitive stock by the integral thermal transfer printer, a Sato M-8485S, from a selection of about 100 stockkeeping units (skus) in the marketer's computer.

Duplicate data are printed on the 933-in. surface, with the specific five-digit sku in a 5/16-in. height, separate lines for product descriptives and dimensions and expiry date, plus a clear, highly scannable bar code. The labels are placed uniformly on the shippers and are secured by a simple wipe-down brush.

Cases are manually packed off for palletization and movement to the company's massive freezer. Nieves notes that this movement has been much quicker and smoother with the new equipment. "We're now packaging at exactly double our previous rate" at a 20/min level, "and with three fewer people at the bottom of the line."

Butte adds, "Bringing in the printer/applicator is one of the very best changes we've made in our packaging operation. The machine is one of the most reliable I've ever been involved with, and that's critical with a packaging line that can handle nearly a hundred variations in product and container possibilities.



Completed cases, left, their labels readable on two sides, are manually loaded onto wooden pallets for transfer to a freezer. Shippers are taped in the length direction, below, by an automatic top-and-bottom case taper.

"Payback is relatively quick, too, with savings of at least \$500 per week. But probably the best measure of our results is the fact that we've been adding the new equipment on the other packaging lines on a regular basis, and the implementation has gone as smoothly as with the first machine. It has made it much easier to focus on expanded distribution and getting into new markets, which is what this is all about." In fact, it has been a piece of cake.

More Information Is Available:

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