



SAVING DOUGH

Canadian cookie producer gets sweet rewards with off-line digital case printer

Choosing the right equipment to keep production lines moving at optimal efficiency is rarely easy or obvious. But like all successful companies, Canada's thriving baked-goods producer **Voortman Cookies Limited** has gotten very adept at keeping up with its expansion needs and growing demand for its products since the company's very first production run in Hamilton, Ont., back in 1951.

Today, Voortman produces a staggering variety of premium-quality cookies at a 250,000-square-foot, state-of-the-art production facility in Burlington, Ont., employing about 350 production staff on a three-shift, five-days-a-week schedule, with daily capacity to churn out over nine million cookies for retail customers across North America.

Recently, the company found itself exploring various options for printing barcodes directly onto shipping cases coming off the facility's 10 busy production lines.

Because all of Voortman's key customers—including **Wal-Mart, Publix, Fortinos, Loblaws, Sobeys, Meijer** and **Metro**—require for barcodes to be present on all their inbound shipping cases, the company needed to improve on the previous method of having the cases pre-printed before being put on the line.

Not only was it becoming an increasingly expensive practice, it took up a lot of valuable warehousing space to man-



A Voortman employee readies a stencil film for placement onto a stencil load device, to be uploaded to the print cylinder of the digital Optimizer printer.

age a large inventory of all the pre-printed materials to accommodate so many SKUs (stock-keeping units), and it caused waste when some of the slow-moving SKUs were discontinued.

The idea of inkjet printing was rejected because in order to print on adjacent panels, each of the 10 lines would require installation of two inkjet printers and two box flippers. This would take up more floorspace than could be allotted, while also requiring a very large capital investment and substantial maintenance requirements.

Likewise, print-and-apply labeling was turned down due to the rather high cost per case, the limited size of the labels for printing all the required product information, and increased staffing requirements on the packaging lines.

Another option was to install a central barcoding system that would handle cases as they traveled to the central pal-

letizing system; but there was thought to be too much risk of incorrectly identifying the boxes and printing the wrong information on them.

Subsequently, the plant's engineering team came across an advertisement describing the **Optimizer** off-line digital case printing system for blank cases, developed by the Clinton, Conn.-based digital printing systems specialists **Iconotech**.

After conducting an on-site visit to a long-time user of digital printing to see it in action, Voortman quickly placed an order for an **Optimizer** through **Iconotech's Canadian distributor, Resolution Technologies Corp.**

"At first we shied away from this option, since it would mean bringing another operator and the correct printed cases to the lines, instead of bringing generic cases to the lines," recalls Voortman's design engineer Andy Kieft.

"However, the low printing costs, and

having just one central printing station, were very attractive features.”

Kieft explains that Voortman used to employ a case-printing machine years earlier to make the printing mats in-house, but found it to be too burdensome.

What made the Iconotech systems so attractive, he says, was the built-in flexibility to make any changes to the stencils on-demand, along with the well-designed indexing system in the blank case magazine, and the automatic restacking of the cases.

“These were the main factors which convinced us to purchase the Optimizer,” states Kieft.

MANY USES

Installed and started up in September of 2003, the *Optimizer* was soon put to work on far more tasks than initially envisioned, according to Kieft.

“Almost immediately, we started to print not only the case codes, but also ingredient listings on the ‘bulk’ cases on the top flaps,” he relates. “This was done in addition to the previous method of having ingredient listing cards for the items placed right at the bulk-cookies display stands.

“For a period of time, we had pre-printed labels with nutritional information applied by hand to the inside liner of the ‘bulk’ items, but when the cost of keeping inventory and updating the information became evident, we quickly realized that it would be far more cost-effective to use the Optimizer to print that information.”

The Voortman plant runs about 60 SKUs, in about 12 different sizes, on the *Optimizer*: with the average run size of about 2,000 cases for 40 SKUs taking about an hour per run; and 300-case runs for the remaining SKUs taking 20 to 30 minutes.



Bundles of printed cases sit in the feed magazine of the Optimizer off-line digital case printing system at the Burlington production facility.

quick changeovers for printing new messages is particularly important to the Voortman operation, according to Kieft, who says that flavor and ingredient changes are a frequent daily occurrence in the food industry.

The changeovers are done simply by replacing the imaging film with another one,

says Kieft, with little or no maintenance or downtime.

The Voortman plant prints as many SKUs as needed one shift ahead of each shift production, explains Kieft, so that there is no need to warehouse pre-prints that can't be used due to a change in ingredients, for example.

All in all, Kieft says he is very pleased with both the final print quality achieved by the *Optimizer*, and the fact that it can create logos on-the-fly.

QUICK RESPONSE

Says Kieft: “Iconotech provided us with the quickest solution, with the easiest installation and the lowest equipment cost to handle all of our lines.

“Our cost analysis revealed that acquiring 20 inkjet printers would have cost three times as much as purchasing one Iconotech digital case printer, which is able to supply the quantities we need for all the 10 lines,” he says.

“Additionally, the operating costs of the Iconotech Optimizer are much lower than for inkjets or labelers, because it is virtually maintenance-free.

“While we have not confirmed our cost per case, we think that it has the lowest operating cost compared to the other solutions,” Kieft sums up.

“And it's not just about the costs; the Optimizer's ability to achieve high barcode quality on kraft board is really outstanding.” □

With *Optimizer* running four to six hours per day, depending on the product mix, the printer thus handles about one million cases annually, according to Kieft, or about 4,000 cases per day.

Kieft says he is happy with the *Optimizer's* simple operation, enabled by user-friendly software that allows an operator to design the print message—including text, graphics, logos and bar-codes—right on the PC, and transmit it to a thermal imager that burns the image onto a disposable, 12x32-inch stencil made of thin mylar film mounted to a non-woven fiber backing.

The print message is burned through the plastic at 200-dpi (dots-per-inch) resolution—with the fiber backing remaining intact to maintain the integrity of the stencil—and the imaging film is then placed onto the printer's rotating print cylinder.

The specially-designed stencil film used by the *Optimizer* facilitates the exact placement of high-resolution print anywhere within its 11x32-inch print area.

Flat cases are then automatically fed to the print cylinder from the shuttle-feed mechanism, and the image is transferred onto two adjacent sides of the case.

At machine exit, the printed cases are automatically stacked, squared, and moved onto a powered return conveyor for palletizing.

The ability of *Optimizer* to perform



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