

Plastics News

A clear breakthrough

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Friedrichshafen, Germany — Milacron Holdings Corp.'s see-through plastic container, an alternative to the metal "tin can," is now on store shelves in Seoul, South Korea, and Shanghai, holding Del Monte pineapple chunks and slices.

The customer is S&W Fine Foods International, a company of Del Monte Pacific Ltd. Milacron CEO Tom

Goeke said Del Monte bought a Ferromatik Milacron injection molding machine with 280 tons of clamping force to run Klear Cans on a four-cavity mold.

Milacron announced the first commercial applications of the coinjection molded Klear Can on Oct. 18 at the Fakuma trade show in Friedrichshafen. Goeke also highlighted the Klear Can news in Milacron's third quarter conference call to financial analysts on Oct. 26.

Early in the call, Goeke told analysts: "The product generated significant buzz at the show, and the product introduction in Shanghai and Seoul was a great success."

The molding machine bought by Del Monte Pacific is able to turn out 12 million cans a year. In the third quarter conference call, Goeke said the Del Monte line is a small "startup system" that costs less than \$2 million.

He said machines that can turn out 70 to 80 million Klear Cans a year are about twice that price, but give far higher output.

"As capacity expands, I'm sure they'll be moving to a larger system," Goeke said of Del Monte.

Since the news was just announced, the Klear Can sales do not appear in Milacron's third-quarter results, and Goeke told analysts the company did not include prospects for the see-through can in its forecasts. Milacron is traded on the New York Stock Exchange.

"We believe that the technology has a tremendous amount of opportunity," he said.

The market is huge. Goeke said that if the Klear Can could capture just 1 percent of the 75 billion metal cans produced a year, that would require 30 or 40 Klear Can production lines.

Nobody really knows how many metal food cans are made each year. Other estimates range from 30 billion to 50 billion. The first cans were developed more than two centuries ago, according to the Can Manufacturers Institute.

But in an interview at Fakuma, Goeke said a plastic food container that can show consumers what's inside is a "major breakthrough in packaging." Milacron spent about two years working with Del Monte on the Klear Can application, he said.

He said the food company is doing a major rollout of the see-through cans in Seoul, and Shanghai. After Asia, the next step will be launching the new cans in Europe.

The timing of the Klear Can news at Del Monte Pacific, during Fakuma, was a coincidence. Goeke said Del Monte would not allow Milacron to say anything about the new pineapple packaging until it was actually on store shelves. *Plastics News* had reported last year that Del Monte Pacific was working to commercialize the Klear Can, but Milacron officials had declined to comment.

That was until Oct. 18. Milacron officials scrambled to promote the Klear Can news at Fakuma, the second day of the trade show. A large video screen at Milacron's booth touted the Del Monte news and Milacron also had the pineapple cans at the show.



Goeke, interviewed at Fakuma the day after the announcement, said about 10 potential customers have projects in development for the Klear Can. He declined to identify them, but said the Del Monte announcement will spark more interest.

"The exciting thing is, as it got released, the phone started ringing," he said.

The cans are being molded in Del Monte's canning plant in the Philippines.

"It's not integrated into the filling line, but they're taking them in the same injection process right to the can line," Goeke said.

Milacron officials say the Klear Cans are easily integrated into existing production streams at canning factories, and require minimal customization or tooling additions — an important feature for any new packaging material. Klear Cans, which have a metal ring on the top and a pull-off lid, are lighter than all-metal cans, reducing shipping costs, the company said.

The Klear Cans are made of two layers of polypropylene sandwiching a thin barrier layer of ethylene/vinyl alcohol (EVOH). The Del Monte injection press has an inline barrier inspection system, Goeke said.

Milacron's Kortec business played the key role in developing the process. Milacron bought Kortec Inc. in 2014, picking up a leading supplier of coinjection molding technology for making barrier packaging. Goeke said Kortec already had been working on two major applications: the see-through plastic can and a single-use coffee pod.

Growth in coffee pods



The coinjection molded coffee pod also is now commercial, Goeke said at Fakuma. Keurig Green Mountain Inc. is using the coinjection molded coffee pod, which is fully recyclable, for the Canadian market.

"If that works well, they'll expand the program," he said.

A Milacron spokesman said Keurig has purchased five coinjection molding systems to make 1 billion of the recyclable pods a year for the Canadian market.

Keurig **announced in June** that it expects 100 percent of its Canadian pods to be recyclable by the end of this year.

In the conference call, Goeke told financial analysts that Milacron also has sold a couple of lines going into Europe to make coffee pods for other brands.

Goeke said Keurig brought the coffee pod design to Milacron, as opposed to the Del Monte pineapple can, which uses the Klear Can developed by Milacron.

After Milacron bought Kortec, the machinery maker accelerated development of the Klear Can and put the product through independent testing needed for food-contact packaging and the retort sterilization process, which heats the food sealed in the cans.

Retort was a key innovation in Klear Can, Goeke said. The metal ring is only on the top of the can, not both top and bottom as in standard metal food cans.

"The uniqueness of the design — because these have to be retortable — is this pillow on the bottom," he said, holding up one of the plastic cans at Milacron's Fakuma exhibit. So when you go through a retort process, if you didn't have a buffer, you would actually distort the can. You would lose the roundness of the can. All of the retorting goes through the bottom expansion and contraction, so that the can retains its round shape, and its

stackability. So that's the unique feature of the can. You keep it completely round through retorting."

A \$25 million investment

Goeke said Milacron has invested about \$25 million in the coinjection process and commercializing the Klear Can with Del Monte.

He said that Kortec had been making all the Klear Cans for customer test runs at its facility in Rowley, Mass.

"Now there's a couple of contract molders in the U.S. that are actually supplying people with both coinjected parts and Klear Cans for sampling. We were doing it all ourselves, and then we had a couple of contract packaging molders invest in it," Goeke said.

As the technology spreads, Goeke said, those molders have the potential to become the long-term plastic can suppliers to food companies — similar to metal can makers.

Kortec introduced the Klear Can in 2014 at the Interpack trade show in Germany — and Milacron molded the cans at both NPE 2015 and K 2016.

"The Klear Can is BPA-free, recyclable and microwaveable," he said.

Milacron, which makes machinery, mold components and hot runners, is based in Blue Ash, Ohio, a suburb of Cincinnati.

Milacron was beaten in the plastic food can commercialization race by Sonoco Products Co., which announced in April 2016 that it was working with McCall Farms Inc., a South Carolina food canner, to introduce its TruVue plastic can for McCall's line of Glory Farms beans at grocery stores in the southeastern United States.

On Oct. 17 — the day before Milacron's pineapple can news broke — McCall Foods announced its Glory Farms can was named a finalist for the 2017 Gama Innovation Awards.

Sonoco uses extrusion to make the TruVue. Milacron's Klear Can is injection molded.

Without naming Sonoco, Milacron took a swipe at the competitor, saying Klear Can is "far superior to the competition's extruded three-piece clear plastic can."

Sonoco did not return a call to comment on this story.

The plastic can war of words has begun.

"The extruded can offered by the competition suffers from die mold streaking, greatly affecting clarity," Milacron said.

Plastic versions of the "tin can" also are facing questions from the Association of Plastics Recyclers. Last year, the U.S.-based trade group expressed concern about the metal ends contaminating the plastic waste stream. APR did not specifically cover the Klear Can or the TruVue in its statement.

For Klear Can, Goeke said, the lid is removed at home and placed in the recycling bin. "So you end up with a metal ring. And when you recycle plastics, the first thing they do is grind it. They wash it, grind it and then further wash. And then they separate and PP floats, metal sinks. And then it goes further through the process and through a magnet" removing the metal, he said.

Plastics News reporters Audrey LaForest and Jim Johnson contributed to this story.

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