



feet of floor space.

This same system also can handle the new yogurt and cereal combination products. Cereal overcaps, which had been filled and sealed off-line, were simply brought into the main sealing machine and placed upside down atop the sealed yogurt cup. Without an integrated system, however, this packaging/marketing innovation would not be economically feasible.

Why the push for all this integration? "The food processor feels it creates too many headaches" to put together systems from multiple vendors, says a manager of a Connecticut-based company representing overseas manufacturers. This company and a Wisconsin-based horizontal wrapper company are now owned by a Swiss packaging equipment maker. The company not only sells integrated systems, but even offers engineering services to put together a line. With food companies paring engineering staffs to cut costs, those engineering services are one of the supplier's fastest growing assets, the company president says.

The question then becomes: "Is there room for the specialized equipment vendor?" Yes, but only if the products perform well. For instance, a Florida-based case-packer manufacturer was selected by a large processor for its line of fat-free cookies. The manufacturer developed a downstack accumulator instead of the conventional upstack.

But even specialized equipment makers are producing more multi-purpose machines. A Texas maker of collators and case-packers is introducing a robotic collator/case-packer. It will pack a variety of case sizes and product sizes in most stand-up configurations at a rate of

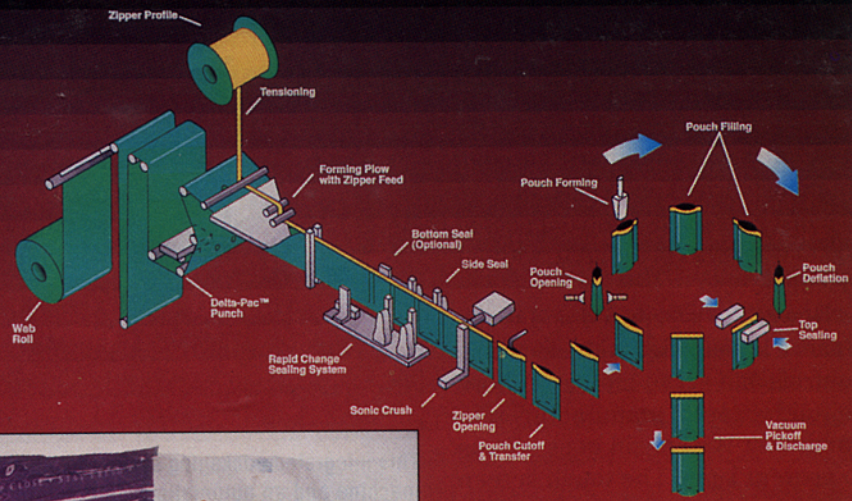
40 picks per minute. With multiple packages per pick, it can keep up with the fastest baggers.

In another example, a Northwest wrapper maker was able to eliminate considerable breakage

**T**oday, the dominant trend in packaging involves increasing throughput within existing or diminishing confines.

and labor costs by integrating production and packaging. To package two flavors of sandwich cookies in a four-count vending package, a cookie processor was making each flavor in batches, stacking the

## Typical Self-Standing Pouch with Zipper Workflow



The stand-up pouch has provided snack companies with an economic alternative to glass or spiral canisters while generating consumer excitement.

cookies in totes and placing them in magazines to feed to the wrappers. The machinery supplier split the production to produce both flavors simultaneously and sequence them into the wrapper directly to produce the desired packaging. The magazines and all manual handling were eliminated.

### MORE AND MORE ELECTRONICS

Packaging machinery makers have liberally applied computers and electronics to their products. Programmable controls, PC-based control units and even touch screens are available for several types of equipment. Now, information on run conditions can be fed into a network or a master control center for better coordination of production or system troubleshooting.

Electronic controls have permitted automaton in areas where it was not possible before. A Wisconsin-based weigher maker uses statistical filters in its controls to account for normal vibrations. Now processors can put a weigher almost anywhere in a plant. These weighers also have plug-in electronic control modules for each bucket to reduce maintenance

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## PACKAGING

downtime and increase control.

Before electronic controls, handling delicate or non-uniform products was a messy nightmare for baked snack and candy processors. The above Connecticut company now uses cameras, photoelectric eyes, ultrasonic monitors, variable frequency drives and servo motors to convey products into wrappers at 500 to 600 items per minute without touching.

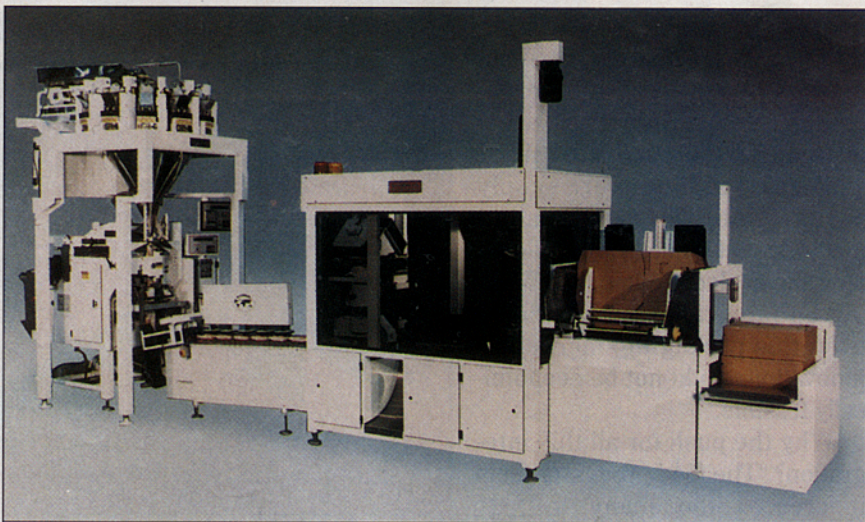
Downtime is reduced and maintenance is simplified with electronic controls and servo motors. A horizontal wrapper manufacturer in northwest Wisconsin uses servos to prevent jams. The touch screen control can even troubleshoot maintenance problems.

At the pinnacle of packaging technology are robots. Once considered a high-tech marvel too expensive to use in "mundane" food processing, robots are appearing more and more in snack food packaging. Often the robots are the missing link that completes a fully automated, integrated operation. For a fragile fat-free snack, "robotic systems are the next step to replace manual loading," predicts the Wisconsin horizontal wrapper maker. Potential labor cost savings could reach into the millions of dollars.

### STAND-UP POUCHES

The newest package in the snack food industry, the stand-up pouch, continues to generate interest and excitement. For example, new packages from Nabisco Foods Group's Planters Division have been jumping off the shelf, and are one of the major reasons for the 5% growth in the snack nut market. Mariani Packing Co., a regional fruit snack maker, has seen its market share jump 50% with its standup pouch package.

Before Planters rolled out its nut products, the company conducted consumer research on the bags. Eighty-one percent of those polled said the bags were better than other packaging; 73% said the bags were more appealing and attractive;



This integrated packaging system for chips combines a weigher, a vertical form/fill/seal machine and an automatic case erector/packer. Capable of handling bags at speeds of up to 100 bags per minute, the unit only requires one operator.

91% found them easier to carry on the go; and 66% found them easier to eat from.

All these standout results are attributed to the unique package look and outstanding graphics, says the manager of a Florida-based man-

ufacturer that produces the pouches. Agree shampoo in a pouch. Nonetheless, he is ready with a line of pouch machines that maintains 160-per-minute line speeds even when adding a zipper.

Even if stand-up pouches should fail in the marketplace, these machines produce a superior flat pouch versus vertical machines, the Florida-based manager claims. Leakers are guaranteed less than 1% vs. 3% to 10%. Zippers cost 30% less because they are applied to the short side.

Both stand-up manufacturers agree that the pouch has many advantages over the packages it currently replaces. At a cost of under seven cents each, it easily beats the total cost of glass jars or spiral wound canisters when shipping and storage are considered. It is also very competitive to bag-in-box applications in capital cost and floor space, as well as individual package cost. As machines with larger sizes are released later this year, the potential will be even greater.

Be it a new package or new equipment, snack manufacturers have many more options now available, including R2D2. ●

Huston Keith is a packaging and marketing consultant located in Marietta, Ga.

## **T**he fastest wrappers

are of little benefit

if accumulators, weighers

and collators cannot

deliver the product

fast enough.

ufacturer that produces the pouches. Young people have started buying these products, in contrast to the more typical "bridge club" buyer.

When a zipper feature is added, the stand-up pouch will be a runaway success, he predicts.

"Food processors are still waiting to see if Planters will be successful with the stand-up pouch," cautions a manager at the Connecticut company, citing the lack of success with