

MOTION CONTROL

NEWS

It's in the mail — Servocontroller keeps samples coming



The Pack-Smart 911RD Rotary Placer Machine uses an Industrial Indexing System DeltaMax 1½-axis servosystem to control rotational speed of the arms. The arms carry suction cups to pick up oddly shaped objects. The servosystem also monitors envelope placement on the conveyor belt.

compute the arrival time. This data lets arm-mounted suction cups drop samples in envelopes at just the right time. The beauty of this approach is that the system works reliably even when envelopes are randomly spaced or the conveyor changes speed. Line speed is about 3 units/sec.

“We need precise placement,” notes Brian Gagnon, president of Magic Mailer “And the new machine gives us that. We routinely get 0.003-in. accuracy,

more than enough to guarantee that CDs, for example, get into the envelope correctly and are not damaged in the process.”

In a trial run, engineers had the rotary placer machine place 750,000 CDs into envelopes. Test showed none of the CDs had handling damage.

Next time you get a CD, shampoo bottle, or other sample in the mail, you can thank engineers at Pack-Smart Inc., Toronto, for figuring out how to get such irregularly shaped objects into envelopes. Odd-ball items such as these create problems for conventional pick-and-place machines. Careful spacing is a must for envelopes on the conveyor line feeding traditional insertion equipment. Required spacing accuracy is often measured in thousandths of an inch.

Aircraft-grade aluminum used on the rotary carrier limits inertia and contributes to product placement accuracy.



OEM servosystem specialist Industrial Indexing Systems, Rochester, N.Y., devised optical sensors for the project. The sensors recognize an envelope's leading edge. A 1.5-axis servocontroller notes the edge position and the conveyor speed. It uses this information to