

How to Ensure Accurate Placement of Promotional Items During Packaging

For placement of literature, coupons or other items

Automated placers reduce scrap, time, money

As a consumer, have you ever opened a new CD to have it fall out of the package, together with splinters of plastic?

As a packager, has your product ever been misaligned in its container, causing you to scrap the package altogether?

As a packager, has Marketing requested a promotional item be incorporated in the final packaged product that is challenging to handle?

Or, worse yet, have you heard from a dissatisfied customer who complained about a product that you determine must have been defective before it even left your plant?

Packagers demand accurate placement of products like CDs, DVDs, and gift cards, or coupons on packs of cigarettes or in cartons of soda, to maintain processing efficiency, maximize merchandising opportunities and simply meet retailer and consumer expectations.

Unfortunately, improperly positioned products during the packaging process are a frequent outcome. Many automated systems experience problems skewing products sideways or placing them inconsistently. And manual placement, while exacting, is costly in terms of both the labor costs and ergonomic issues.

Another option: Graphic Packaging International Inc.'s Minnesota Automation Division Products group, whose expertise on machines for picking and accurate placing common and complex products is invaluable. The group produces a line of advancing cam placers that deliver product exactly where it is supposed to be at exactly the right time. Because of the technologies inherent in these machines, placing complex products, not easily handled by other devices, are straight forward for us.

The technology

The machines utilize a patented advancing cam rotary design that can be driven off the host machine for continuous-motion applications or equipped with a servo drive to place products for random feed or multiple speed applications. A servo driven unit is also the choice for "plug-and-play" applications where the placer might be rolled up and moved from one line to another.

The heart of the system is the cam design, engineered to either advance or slow the normal motion, which allows the product to be accelerated and the speed matched to the moving target. Vacuum stems lift the product from a magazine and place it with forward motion onto the target (see drawing next page)

The systems are designed to interface with most side-seam gluers, handling a broad spectrum of coupons, literature, and promotional pieces.

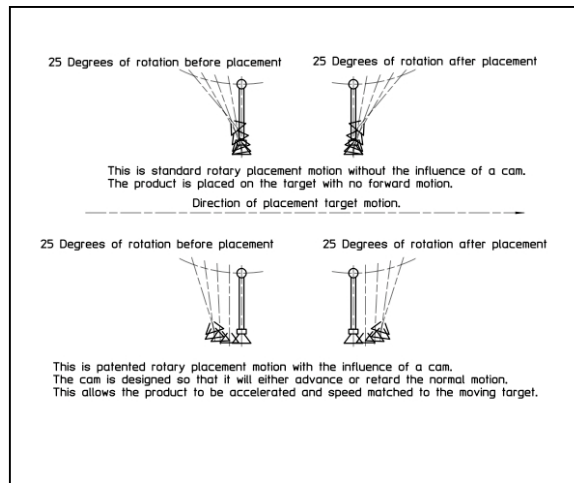
"Graphic Packaging produces a line of Minnesota Automation advancing cam placers that deliver product exactly where it is supposed to be at exactly the right time."

Ensuring proper placement

Automated placers reduce scrap, time, money

Depending on the application, the units can hit placement speeds of 300-400 per minute—with high typical accuracies of +/- 1/32" and low scrap rates.

How it works:
Drawing shows the enhanced performance of patented rotary placement motion using a cam.



For example, a Minnesota Automation Products' client that markets gift cards was using a strip-type feeder to place the cards into a paperboard carrier. The paperboard is then folded over to hold the card. A bar code used by the cashiers to activate the card must appear readable through a window after the package is folded, meaning the card must be placed in the exact correct position.

Using the strip feeder, the company was running about 125 per minute with a scrap rate of about 10%—in other words, slow and with a high level of waste. Misplacement led to scrapped product, poor visuals for the customer at the point of sale, and an inability to scan the product at the register.

Minnesota Automation Products worked with the company to install an advancing cam rotary placer that boosted output to 400 pieces per minute with a 1% scrap rate.

The advantages are even more pronounced when an automatic placer replaces a human operator. A surprising number of manufacturers and packagers are still placing products by hand into their case or container. Not only are speeds and accuracy far less than those achieved with an automated system, manual placement opens the door to all types of ergonomic issues. A person functioning like a machine cannot possibly do the job of a machine with the same consistency and longevity.

Many factors play a role in determining optimal placing system specifications, including:

PRODUCT — If placement accuracy is critical because of alignment needs, or if you are trying to tip something into a slot, such as a CD into a jewel case, you want to place the leading or trailing edge in; and

Ensuring proper placement

Automated placers reduce scrap, time, money

SPEED – Different methods of motion are recommended for different speed ranges; and

MOVEMENT - Direction in which the target is moving vs. the direction of the rotary placer. With the target and rotary moving in the same direction, the placer will use inline motion; if the rotary is turning opposite the flow of the target, then accelerated motion is the proper choice.

“The company simulates the production environment at its own facilities—developing devices and modifications specifically for the desired use—to prove the application’s feasibility and fit.”

One of the keys to using any placer is the initial set up. Minnesota Automation Products starts the process by reviewing the application with the customer and asking for product samples. The company then simulates the production environment at its own facilities—developing devices and modifications specifically for the desired use—to prove the application’s feasibility and fit.

Once the simulation is complete and the system proven to work, the consultation and training assistance begins. Minnesota Automation Products strongly advises customers to bring a technician to its facilities to review the system and its workings. The technology is advanced, and there are tricks and tips specific to Minnesota Automation Product’s units that ensure optimal operation.

The company provides training, working with its clients to get them the necessary hands-on experience, and then backs it up with written support documentation on CDs.

Conclusion

Proper automated placement begins with picking a product properly and concludes with the product fit exactly in its corresponding package as intended by the packager.

In many applications, inaccurate placement is a failure and the product has to be scrapped. You should know that. Most often, it is unacceptable for a product to be misaligned by a quarter-inch.

Graphic Packaging's Minnesota Automation’s Products’ patented advancing cam system and its complete line of placers ensure proper placement. And that saves money, improves efficiency, enhances aesthetics, and eliminates misalignment issues with a range of products.

For further information, contact:
Minnesota Automation Products
Graphic Packaging Intl.
Packaging Machinery Division
975 Third Street S.W.
Crosby, Minnesota 56441
Phone: 888-800-6861
www.minnesotaautomation.com

