

CASE STUDY: Packaging Innovations That Reduce Costs, Enhance Differentiation

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Many OEMs believe that the role of the mold manufacturer is to design and build a mold according to the prints provided by the OEM. While mold manufacturers can certainly do that, some mold manufacturers today have expanded their role to include part design and product development assistance. Industrial Molds Group, a Rockford, IL-based mold manufacturer, has become known for its capabilities to help its OEM customers in the food, pharmaceutical and medical markets design and develop unique and functional packaging.

The Challenge – Helping the customer with a new design that would reduce costs to manufacture, yet keep the package simple, accommodate different sizes, and be child resistant.

The Solution -- Our customer, a leading contract packaging firm specializing in design and development of packaging and contract packaging operations, came to us originally because their engineering team was “swamped” with work, and didn’t have time to do a badly needed redesign on a specific package. “Can you help us with the design of this package?” they asked us.

We often are asked to help our OEM customers with product/package design. With a staff of 60, Industrial Molds Group can provide engineering services that include product design and development assistance, mold design and build, and mold qualification through a sister company located nearby, Pyramid Plastics.

The plastic package they were making for their customer consisted of a fairly straightforward box with a blister pack inside that was currently being purchased through another vendor. Our customer knew the approximate size the package needed to be. From a tooling standpoint, it was just what it was – a box. Looking at it with us, our customer wanted to know how they could make it simple and less expensive than it currently was.

We kept the same dimensions of the package. However, they needed the packaging to be flexible to accommodate different sizes: in some cases they needed the package to be 6” long and in others they needed it be 8” long to accommodate the contents.

Design functionality was also important, so keeping the customer’s desires in mind, we made a part that required only one unique mold for molding one part that then allowed the second part of the package to interlock with the first to keep the tooling costs down. Making a mold for only one style of part for each half of the package – as opposed to making unique right and left halves – and snapping the parts together reduced the cost of tooling. It also simplified inventory. Instead of having two unique halves and having to stock equal number of right and left halves, or having to run extras of one half if those parts were lost in shipment or had molding quality problems, the customer uses the same part to create both halves of the package.

What we considered very simple, turned out to be very valuable to them. In fact, patents were applied for and received on this innovative technology which allows both our customer and Industrial Molds to benefit from this innovation. Currently, this design innovation is universally recognized in our customer's arena as a unique, improved packaging design than was previously being used.

What they liked about what we did – Our customer liked the way we asked the right questions. A good mold supplier is one that drills down into the project, find out what the customer's goals are, and what are they trying to achieve. This customer was impressed by this process. We wanted to know why they decided on the particular package design, and then took the initiative to go above and beyond to what they *thought* they wanted to give them something much better.

This approach also speaks to diversity and cross-team functionality here at Industrial Molds. Often we'll bring in people outside the engineering group to look at the packaging we're helping customers develop because they'll ask the questions that force us to think outside the box for our customers, and push the boundaries of our creativity and innovation in design.

What can the Industrial Molds Group contribute?

Based on our experience as tool makers we can contribute to product and mold design creativity and innovation that utilize the latest in mold technology. That's the key. Instead of just accepting what the customer wants we ask "why do you want that?" and "Why does it have to be that way?" "What are you trying to do?" In some instances, they know why they're doing what they do or why they need a component designed a certain way. However, we try to look at every project, whether it's a simple, straight-forward "box" or a complex closure system, and see how we can make it better, more functional, more manufacturable, and more cost effective for the customer. We try to save the customer money by combining features and functionality, and taking out costs.

In another packaging application we were asked to build a 1+1 family mold for a package that required two parts that snapped together. We found a way to simplify the packaging and reduce costs by making the package design into a single part with a living hinge. When we asked the customer how they felt about that idea, the customer was excited about the prospects. In fact, they hadn't realized that was possible and were amazed that we could create a mold design that would allow that. Based on our experience as tool makers and our knowledge of advances in mold technology, we are able to provide many innovative and creative inputs for a variety of packaging applications.

In both of these cases, the tooling required was less expensive because it reduced complexity of the part and the quantity of tooling needed. In both cases, the innovative design took out costs for the customer and helped them realize savings. In the first case, the tooling was the least of the cost savings. By virtue of having just one part, the customer's inventory costs were reduced significantly. With two different parts in a family mold, if one part is lost, your inventory is off. The customer would have had to order a quantity of that one part, which means the molder would have had to block off one cavity to mold just the part they were short. In the second case, the customer saved money by eliminating a secondary operation.

Advantages of Collaborating with the Mold Manufacturer – Collaborating with the mold manufacturer’s engineering team early in the development phase of a packaging project provides a number of benefits. When an OEM goes to a mold supplier that has extensive engineering and other services beyond just cutting steel to a print, they can take advantage of a lot of intellectual property within that mold manufacturing organization.

One big benefit is that manufacturing problems can be identified long before the final design is completed, and that can save the OEM money in the long run. The experience and expertise in mold design and development that our design engineers possess often provides customers with new ideas or a new way of looking at the packaging. Working with creative people at Industrial Molds Group provides our customers with packaging that helps them differentiate their brand and set their company apart from the others in their market. That means that both Industrial Molds Group and our customers achieve success.

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