Getting Packaging Right With Rapid Prototyping

Kelly Doyle

Ensuring the design of a thermoformed package is correct is not something upon which medical device manufacturers want to spend significant time or money. Therefore, this Tech Brief offers an alternative to developing the finished CNC machined mold that takes advantage of rapid prototyping technology.

Kelly Doyle is the tool design manager for Brentwood Industries. He has spent the last eleven years working with medical customers to design packaging that both protects the product and brings value-added features to the end user. Doyle can be reached at 610-236-1162 or kdoyle@brentwoodindustries.com [1].

One plastic thermoformer has been able to not only enter but thrive in the medical device packaging industry by utilizing rapid prototyping to keep up with the industry's constantly changing demands.

Using 3D printing technology, a prototype mold is built, which functions as a traditional mold. The packaging material can then be formed into the rapid prototype tool and the customer is left with a functioning prototype in a fraction of the time and price it would take for a regular part. The rapid prototype tooling adds an additional step in the overall process, but its benefits can't be ignored.

Rapid prototyping can be completed in less than a week, while the traditional CNC machining can take up to four weeks to complete. The cost of the prototyping is half the cost of the traditional method, however, quality is not sacrificed at the expense of speed.

Lending itself to all types of packaging, rapid prototyping is a good tool for checking product fit especially snap fits. Don't be mistaken though; the prototype is still exactly what it says it is–a prototype. While it is a functional part, it can't withstand a drop test, nor can it be sterilized due to the mold's rough texture transferring to the prototype part. If those processes are needed, the customer should error on the side of the conventional CNC machining.

Rapid prototyping can go a long way in bringing engineering and marketing together. The company and customer can promptly test the feasibility of an idea while not having to commit too much time or money to an idea that may not work, or one that could just as easily lead to a successful product.

Online

For additional information on the technologies and products discussed in this article, see *MDT* online at www.mdtmag.com [2] or Brentwood Industries at www.brentwoodindustries.com [3].

Source URL (retrieved on *10/23/2014 - 7:22am*):
http://www.mdtmag.com/articles/2010/01/getting-packaging-right-rapid-prototyping

Links:
[1] mailto:kdoyle@brentwoodindustries.com
[2] http://www.mdtmag.com
[3] http://www.brentwoodindustries.com