

THE NAVIGATOR



money. By putting two or three parts into the same tool, this allows savings from buying two or three mold bases or Mudd sets. Also, the timesavings to mold design, programming, and high-speed milling one family mold compared to repeating those steps in multiple molds is critical for timeframes and budgets.

Family tools are specified by how many different parts are held in the same mold. For instance, a 1+1 family tools means there are 2 different parts and a 1+1+1 family tool means there are 3 different parts shared in the tool. Vista commonly produces these 1+1 or 1+1+1 family tools with "runner shut-offs". The runner shut-offs are useful for sampling one part at a time in a family tool. This allows the injection molding press operator to process each part with the precise care that each part needs. This eliminates one part that is sticking in the tool to compromise another part to run successfully.

Even when running multiple materials, family tools are practical. Again, this is another advantage of using a runner shut-off. In between materials, the material will be purged from the press so the press is clean and ready for the next material sampling. This process allows the press operator to save time and money for the end customer. Without a family tool and a runner shut-off, the press operator would have to purge the material out anyway, but also replace the current mold with the new mold and get it up to a desired temperature for sampling. This could take up to two hours of additional time. Additional time means more cost!

Prototype tools are being made every day to check two main areas. The part design and the functionality of the desired spec material. These molds are essential in product design and development. To get spec material and a design approved before production tooling is released, is a giant step in the right direction.

The Family Tool Advantage

As Vista's tooling division strives for speed and cost savings, we have found family tools to be effective in both areas. A family tool is the technique of putting two or more different parts into the same mold for injection molding. The injection-molded parts share the same mold base and center sprue. When the mold is injected with plastic, the family mold cavities can be filled and ejected at the same time.

Family tools have become more the norm due to the demand of saving time and



Above is a 1+1+1 family tool with a runner shut-off. Each part in this family tool has an undercut feature that has been captured with a hand pick-out.



This 1+1 family tool shows different parts being shot at the same time. The runners, gates, and the center sprue are removed to complete the finished part.

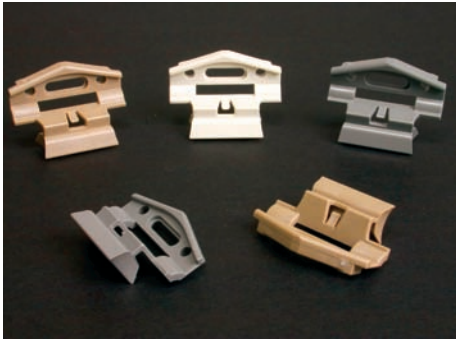
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Bridge Tooling

VISTA
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Mold Life Success Stories

In most cases people turn to Vista with a rapid tooling project to check their product design, sample a spec material and to run 50 to 1000 parts for marketing, field tests, or testing requirements. Increasingly, these "prototype tools" are functioning way beyond the original expectations.



Just under 40,000 parts were shot off the prototype tool. This part has a step parting line along with an undercut. This tool shot first parts in two weeks.

These two stories have similar themes for two different customers. The first story involves a customer who needed spec material parts to sample out the design and to get product for field-testing. The first 200 parts were shipped and field-tested. The parts needed to be tweaked, so the tool was modified. Another 200 parts

were shipped for additional field tests. The parts were accepted after the testing was completed and another 500 parts were ordered for marketing and focus groups.

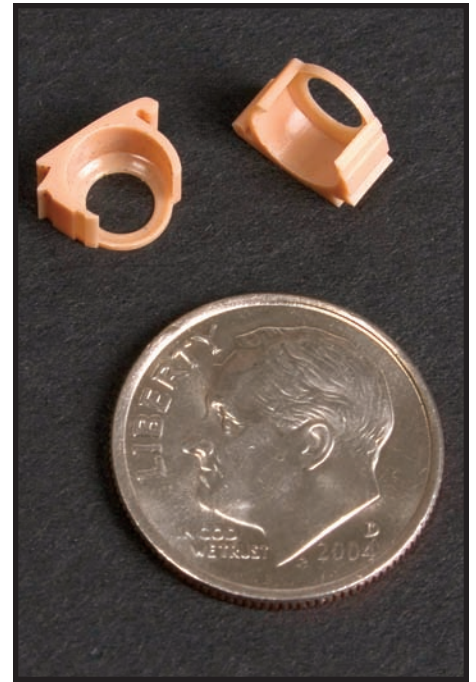
To make a long story short, the production mold was delayed and more and more parts were shot off the prototype tool. The final tally of plastic parts that were shot off the rapid tool was just under 40,000 parts. The customer was thrilled that the tool was able to produce so many parts with a consistent quality. The product was still released without any delay and when the production tool came online, the transition was seamless.

The second story is that the customer came to Vista Technologies for an aluminum bridge tool. This tool was made for the customer while their multi-cavity production tool was being made elsewhere. The customer needed 500 spec material parts in their hands in three weeks to be able to launch their new product line on time.

Thirteen months later the customer is still ordering about 1000 to 2000 pieces a month because their multi-cavity mold has been delayed. The

customers purchasing department was relieved to know that they are still able to get parts shot within 1-½ weeks to keep their product in the competitive market.

These are just two examples of success stories where the prototype tool was able to double as a "bridge tool" or a "low-volume production tool".



This aluminum tool was inserted with a P-20 steel insert for thin wall support and structure. 15,000+ parts were run off this tool.

For up-to-date information check out our newly updated web site

www.vistatek.com

E-mail us at: prototype@vistatek.com

Information available includes:

- Latest publications
- Newest developments
- Upcoming trade shows and activities Vista will participate in
- Current and back copies of **The Navigator**

