
Subject: Small Batch Manufacturing

Posted by [LaunchFarm](#) on Mon, 08 Oct 2012 22:33:26 GMT

[View Forum Message](#) <> [Reply to Message](#)

So you've gotten your Shapeways plastic prototype back and it works perfectly. Now you are thinking about producing a small batch (under 500 units) of this small plastic product to sell online. How do you begin the actual search for an inventor-focused manufacturer to explore pricing and help with next steps on the heels of your shapeways model? Any thoughts? Does Shapeways partner with anyone to facilitate this process?

Any info will be appreciated.

Subject: Re: Small Batch Manufacturing

Posted by [Bathsheba](#) on Tue, 09 Oct 2012 07:47:55 GMT

[View Forum Message](#) <> [Reply to Message](#)

Under 500 units, you'll need it to be a mighty profitable item. 3DP may be your best option: hand casting is very expensive if you don't do it yourself, while injection molding starts to make sense about 10,000 units. Short-run plastics manufacturing is a vale of tears and broken dreams...good luck.

Subject: Re: Small Batch Manufacturing

Posted by [BillBedford](#) on Tue, 09 Oct 2012 12:57:02 GMT

[View Forum Message](#) <> [Reply to Message](#)

The first thing you have to think about is whether your piece can be copied using a two part mould. If it can there are various ways which it could be made relatively cheaply. These would include vacuum casting in resin, casting in pewter and lost wax casting. If your piece needs a more complicated mould then either the mould costs will go up or your piece will have to be broken down into multiple parts and assembled. Again this will increase the costs.

Be selective when you choose a company to batch produce your pieces. In general I would suggest that the prices charged by those companies producing for the hobby/models trades will be very much lower than those charged by those whose main interest is in producing prototypes for engineering or product development.

Subject: Re: Small Batch Manufacturing

Posted by [denali3ddesign](#) on Thu, 11 Oct 2012 04:10:42 GMT
[View Forum Message](#) <> [Reply to Message](#)

Bathsheba wrote on Tue, 09 October 2012 07:47 Short-run plastics manufacturing is a vale of tears and broken dreams...good luck.

Bathsheba, I'm curious about this. Would you mind explaining why? I have a customer that was thinking to go this route, and would like to give him good advice if short run plastic runs are a bad idea.

Have you had any experience with Protolabs - either good or bad? They offer Rapid prototyping and short run injection molding.

Subject: Re: Small Batch Manufacturing
Posted by [Bathsheba](#) on Thu, 11 Oct 2012 06:17:34 GMT
[View Forum Message](#) <> [Reply to Message](#)

Well, good and bad are very situational: I'm certainly not saying it can't work.

The overall trouble with short-run plastics manufacturing is simply that people don't expect to pay a lot for small plastic things. Unless you've got a really sharp niche, you're competing with people doing runs of 100K from injection molds in China, and they set the expectation for pricing. How much "should" a 2" plastic thing retail for? A trip to the dollar store tells you, \$1, \$2 at most.

That the other responder in this thread suggested pewter is telling...the thing is that once you're into hand casting -- paying someone to make molds and then pour, demold and chase each individual part -- you might as well use a better material than plastic, because it's going to be just as much work and you can charge more for the result. (This assumes that your part is readily castable, which if you didn't specifically design it to be is not immediately likely.)

I don't have specific experience with Protolabs. I agree on "be selective": get lots of quotes but save your money for the very best fit.

I'd also say, research your target method intensively using the Internets, and do your best to make your design manufacturable -- castable if you want to cast it, paintable if you want to paint it, etc. -- before sending it out. If these guys sense that you don't understand their process and won't make your design sympathetic to it, they'll quote high to get rid of you.

Subject: Re: Small Batch Manufacturing

Posted by [denali3ddesign](#) on Thu, 11 Oct 2012 12:14:29 GMT

[View Forum Message](#) <> [Reply to Message](#)

Thanks for the explanation, Bathsheba - it makes a lot of sense!

Back to the OP's questions - no, Shapeways doesn't work with vendors to mass produce products after 3D printing. You may find some very useful info by browsing Kickstarter projects (especially the "Updates"). Here's one to get you started - The Glif. About halfway down the page, the creators of the project put together a video of their search for finding an injection molding company after their successful campaign.

Subject: Re: Small Batch Manufacturing

Posted by [glehn](#) on Thu, 11 Oct 2012 12:23:25 GMT

[View Forum Message](#) <> [Reply to Message](#)

Bathsheba wrote on Thu, 11 October 2012 06:17Well, good and bad are very situational: I'm certainly not saying it can't work.

The overall trouble with short-run plastics manufacturing is simply that people don't expect to pay a lot for small plastic things. Unless you've got a really sharp niche, you're competing with people doing runs of 100K from injection molds in China, and they set the expectation for pricing.

Short-run injection is widely used in the scale modeling industry by smaller companies that make very unusual subjects mostly overlooked by the larger manufacturers (who do in fact inject their products by the thousands in China). As Bathsheba said, this is a very good example of a niche where this can work.

So, I think it all really depends on what kind of product you are planning to make and what market you want to reach. For 500 units I would look into either resin casting, short-run injection or even 3D printing and selling it through Shapeways.

Good luck,
Glehn
