
Subject: Ring smaller than expected
Posted by [epacheco](#) on Sun, 07 Oct 2012 19:13:52 GMT
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Hi everyone,
I recently received my first 3d print, which is a simple ring I modeled in Maya (<http://www.shapeways.com/model/713197/basket-ring.html>).
I got it printed on White, Strong and Flexible and the dimensions are about 4mm smaller in the printed model than the 3d model.
Is this a common factor to consider with 3d prints?
I need to know how to compensate this, since rings have to be sized precisely to a millimeter.
I loved the quality of the print by the way
Thanks,
Esteban

File Attachments

1) [ringBasket_Render_01.jpeg](#), downloaded 54 times

Subject: Re: Ring smaller than expected
Posted by [Youknowwho4eva](#) on Mon, 08 Oct 2012 13:21:48 GMT
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You should email service with the link to your model, order number, and pictures showing the size of you print. 4mm is too much shrinkage for WSF.

Subject: Re: Ring smaller than expected
Posted by [epacheco](#) on Mon, 08 Oct 2012 16:42:22 GMT
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Ok, sounds good.
Thanks!

Subject: Re: Ring smaller than expected
Posted by [Fredd](#) on Mon, 08 Oct 2012 19:36:48 GMT
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Out of curiosity, were you using the US size 10 (19.76 mm diameter) and were all the dimensions off 4mm. Post your STL here and will see if anything is off with the model.

Keith

Subject: Re: Ring smaller than expected
Posted by [epacheco](#) on Mon, 08 Oct 2012 20:23:40 GMT
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Hi Keith,
Yes, I was using US size 10 (give or take a fraction of a mm) and it's off 4mm in every dimension. I'll be posting some pics of the 3d ring and the printed model later when i get home if that helps. I won't post the stl though, for obvious reasons.
Thanks,
Esterban

Subject: Re: Ring smaller than expected
Posted by [Fredd](#) on Tue, 09 Oct 2012 00:00:35 GMT
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No, I was not trying to steal the design, lol Esterban. Was trying to figure out the scale factor where you could scale the model properly, from the STL. Inner diameter mainly. Its not that difficult if you have a dimension from the original model and the finished product
Original height would do it., for scale factor
Scale factor= A dimension you want printed/ same dimension of modelling program.

Subject: Re: Ring smaller than expected
Posted by [epacheco](#) on Tue, 09 Oct 2012 00:24:56 GMT
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Hehe, got it.
So basically what you are saying, if I understood correctly, is that I should scale up my 3d model to compensate for the scale factor in the final printed model?
The thing is, I can't see the STL file directly since maya does not support STL. I actually exported a DAE file using a third party plugin, and same with an STL, I can't import it and see it in maya. So maybe in the conversion process from a maya file to a DAE file it got scaled down.
Once I get a PC I'll get netfabb to check on my future models
Thanks!
Esterban

Subject: Re: Ring smaller than expected
Posted by [Fredd](#) on Tue, 09 Oct 2012 02:18:48 GMT
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So the bounding box height from SW is 2.204cm. Take the bounding box height from your maya model, divide it by 2.204,, then scale your maya model by that amount. Uploading a model is free, if the dimensions match from SW and Maya,once uploaded you are. ready to print. I mentioned Meshlab because it can convert many formats into stl, which would help you.

Besides since scale factor effects height,width, length dimensions when you scale it, according to yucky mathematics should be re-sized properly. Upload, then edit your model to determine if the dimensions work, before you offer it to the evil printers

Subject: Re: Ring smaller than expected
Posted by [epacheco](#) on Tue, 09 Oct 2012 16:39:44 GMT
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Hi Keith,
I'll definitely try that out and see if there's a difference in the dimensions that shapeways has vs. maya's.
I'll be posting back here when I find out
Thanks,
Esterban

Subject: Re: Ring smaller than expected
Posted by [epacheco](#) on Sun, 14 Oct 2012 18:14:11 GMT
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So as i mentioned before, I'd be posting here if I found a solution
After speaking with Mihon from Shapeways, we figured out that the model they had was smaller than my maya file. So, it seems that it was scaled slightly down when I exported the file from maya using a plugin I found online.

He recommended netfabb as a tool to check the final scale of a model before it's uploaded to Shapeways.
Esterban

Subject: Re: Ring smaller than expected
Posted by [SGDesigns](#) on Tue, 23 Oct 2012 23:59:17 GMT

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Definitely, an STL check should always be done on every model before it gets uploaded onto shapeways.
